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ORIGINAL ARTICLES.

THE RECENT ADVANCES OF SANITARY SCIENCE--THE RELATIONS OF MICRO-ORGANISMS TO DISEASE.

(Illustrated by photo-micrographs projected upon the screen.)

Address of the President of American Academy of Medicine.

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The unexpected honor which one year ago your kind suffrages conferred upon me in electing me to preside over your councils, I hold to be equally shared by a thoughtful discharge of the duties of the office. The profession at large may be congratulated that the American Academy of Medicine owes its origin and existence to a wide-spread spontaneity of feeling that the times were ripe for, and demanded some organized effort to aid as a controling power in elevating the standard of medicine in our country. How well thus far we have succeeded must be left not to our own prejudiced views, but rather to the unsparing criticisms of all interested in a higher medical education. Since, by our position, we have invited it, let it arouse each one of us to yet better endeavors in the discharge of our self-imposed task. He who studies the history of medicine in a broad philosophic spirit will learn much of both interest and profit. Viewed from this standpoint, its evolution in the present generation in common with its sister sciences, marks an era in civilization. Differences of opinion, even on the fundamental factors of our polity, have and very likely will continue to exist. Other things being equal, the better trained and armed soldiery win and hold the field. Whatsoever the diversity of gifts, the profession should be actuated by one spirit. Under its guidance, moved by a generous rivalry, the divine decree of the golden rule should be its only code. In the clear light of science rationalistic medicine can have no rivals, and the *isms* and *pathies* which smack of ignorance and superstition will cease to exist. New fields of investigation yet more attractive, because nearer to the great source of truth, will open and there will yet arise a more noble emulation for the still greater advancement of a united and harmonious profession.

A few weeks since as I stood on the rock-bound coast of the bay of Fundy, and beheld its insurging tides, rising more than half a hundred feet, converting empty gorges into deep rivers, and wide-spreading meadows into broad bays, I read in this mighty unseen force the symbol of the progress of our age. The quiet waters of the harbor of Louisburg whose blue expanse covers the wrecks of the French and the English armadas of a past century, at whose stormy burial sank the hopes of nations, who would fain have founded in a new world empires based upon the aggrandising ambitions of kings and clergy, gave no hint save in the mournful desolation of its shores of a fatal policy which so long dominated the ages of the past. In the busy sub-divided occupation of happy peoples, each individual adding to the common store of good, national interests interwoven in one grand commonality by the iron bands of commerce, we mark the monuments of our age, in the elevating of the masses to a higher plane of intellectual and moral development than the world has ever seen.

In the proud contemplation of such progress, the thought arises, have the science and art of medicine grown in ratio with the general development of the age? To discuss a question of such magnitnde in the short hour at my disposal would provoke a smile. And yet, stimulated by the belief that, although proud of present progress, we are on the eve of far greater discoveries and clearer knowledge, we would counsel and urge upon the Academy the greatest devotion and most enthusiastic zeal in elevating the standard of medical education.

The late lamentated Dr. Edward H. Clarke, of Boston, whose memory is enshrined in the loving remembrance of many classes of pupils, divided the teachings upon materia medica into a course for two years, one devoted entirely to the *circumfusa* of the patient, and one to the *medicines* which might be administered. In a somewhat similar spirit I would divide the duties of our profession, and would place first the prevention rather than the cure of disease.

Sanitation can hardly be called a science. Many of its most important factors are, at the best, but imperfectly understood. The sanitary laws instituted by Moses are based upon principles which cannot be under-estimated or ignored, and the Egyptians for centuries previous had understood some sanitary questions and their solution better than ourselves. The traveler to-day may see in the elegant courts of the old Pompeian houses the marble basins, with their leaden pipes and stop-cocks still seemingly ready to turn the treasured waters of the distant mountain into their old time-accustomed chambers alike to bath and fountain, and go again singing in joyous cadence, ministering to need and pleasure as they found their way through the once busy city to the

bay below. Our modern systems of water carriage to remove sewage, is but the adaptation of means to ends well recognized by the ancients, and it would to-day be difficult to find a better specimen of sewer or masonry than the Cloaca Maxima of old Rome. That age of Grecian prosperity and extraordinary intellectual activity, which gave to the world Pericles, Sophocles, Aristophanes, Pindar, Plato, Xenophon, and Socrates, also furnished Hippocrates, the father of medicine. He it was who formulated the fundamental principles of sanitary science, "Pure air, pure water, and a pure soil." The little island of Cos was his home, and here was located one of the most celebrated temples of the Asclepiadæ, or priest physicians of the Greeks. If Hippocrates, living upon this pearl of the Ægean archipelago, whose leafy groves were musical in the evenly-tempered, balmy breezes which ever played in health-giving zephyrs, whose gentle rills were fed from springs gushing forth the distilled dews of heaven, whose verdant slopes, basking in the clear, warm sunlight, were kissed by the deep blue waves of the Mediterranean, the very place of ideal purity and loveliness, recognized the importance of such maxims, what should be their value to the multitudes crowded at the behest of commerce in localities selected without thought of sanitary surroundings?

The discussion of the problems of life, and the important factorage of ills thereto belonging, by the wise and thoughtful of the ages long ago, is not alone instructive, but has a fascination of its own. Whatever else may be said of Mohammedism as a code of morals and virtue, its cardinal principles of cleanliness and careful living deserve special recognition at the hands of science. The great plagues of the middle ages and the desolations following the crusades which swept over Europe, were filth diseases of a preventable character. Although spurred into recognition by the bitter experiences of the passing generations, sanitary science is yet under only partial recognition of the laws, and a popular interest is scarcely aroused, even among our more intelligent classes of citizens.

The vital processes, in their sway over matter, hold the balancing between waste and repair. This hypothetical equilibrium is perhaps the best definition of health, and the safe removal of the waste, worn out material is one of the chief factors of sanitary science. This to the individual as ordinarily situated, might seem a question for easy solution. In the wide stretches of country surroundings, although there are many exceptions, this is generally true, but in the crowded conditions of city life there is no problem more pressing or complex. The law of decomposition is *vital* rather than chemical, and in the changes which ensue there are reproduced in the most marvelous abundance lower forms of microscopic vegetable life, which in their death-dealing danger are far more potent than the evolution of noxious gases. The relation between the house we occupy, its location and surroundings, its water supply and the best means of removal of waste, are as yet but imperfectly understood. The local causes in the production of disease are occupying in a greater degree at present than ever before the best scientists of the medical profession. Although many vital points are yet undetermined, great progress has been and is being made. It is sufficiently established that the water drank, which is contaminated with the specific infection of cholera, typhoid fever, and other diarrhœal diseases, will at least in certain conditions of the system reproduce these diseases, and if these conditions are widespread an epidemic will ensue. A similar law holds good in reference to malarial or intermittent fever, although it is very probable the sources of contamination are not confined to the water supply alone. Heat, moisture, and the resulting decomposition are the seeming gross factors, but it is quite certain that minute living organisms introduced into the system are the potent factors in the production of these diseases.

The condition which this age of steam brings, with its modern miracle of civilization, massing the population in great centers, gives new sanitary problems of a very difficult and complex character.

Surrounded by a media from which there is even momentarily no escape, and which we must ever breathe, atmospheric impurities must be considered as of the highest importance. The air has no absolutely fixed normal composition; however, its two essential elements, oxygen and nitrogen, under ordinary circumstances, are so nearly invariable, they may be re regarded as stable factors. Although, in a simple mechanical mixture, the air is very rarely free from carbonic acid and water, yet carbonic acid, so far as known, is a harmless, but superfluous agent to the animal economy, while, on the contrary, to the vegetable world it is food of the most important character. Some plants go through their entire period of evolution, dependent only upon this element and water. The mechanical admixture of water in the form of vapor is a constantly varying factor, dependent upon location, climate, temperature, etc., and, although rarely entirely absent, is of itself an element comparatively unimportant, but, combined with other factors, it makes possible the development of lower orders of the vegetable organisms, to which we are now warranted in ascribing some of the most dangerous and widespread diseases of the entire animal kingdom. In its indirect bearings upon climatology, influence upon heat, etc., atmospheric moisture is of the first importance.

In the analysis of air, ozone, from its admitted powers, especially in its bearing upon climate and health, should be carefully considered. It is an allotropic form of oxygen which has attained new properties, of an intensely active character, supposed to have been chiefly produced by the action of electricity. Its molecular weight is 48, oxygen 32, and its density is about one and one-half times greater than oxygen. According to Houzeau, the maximum quantity of ozone in the air never exceeds $\frac{1}{700,000}$ part of its bulk, and it is often entirely wanting. More ozone is found during the night than the day; in winter than in summer; upon high rather than low lands; in country than in town; and most of all, after a severe thunderstorm.

Ozone owes its great value as a disinfecting agent

to its exceedingly powerful oxidizing qualities. The compounds of ammonia, phosphorus and sulphur are acted upon with great rapidity, and the odors resulting from animal decomposition are removed instantly. It is probably destructive to all the minute vegetable organisms when in active development, but its effect in destroying the vitality of the spores of plants has not yet been determined.

From the exceedingly active properties of ozone in destroying the low forms of vegetable organisms, and consequent prevention of putrefaction, as well as the induction of catarrhal affections, when experimented with artificially, the important query of its value as a factor of atmospheric composition, and its relationship, if any, to epidemic diseases, has arisen. A committee of the American Medical Association, under the efficient leadership of Dr. N. S. Davis, of Chicago, during the last three years has been doing a considerable amount of work in the solution of this important, but complex problem. Under their direction, careful tests to determine the amount of ozone in the atmosphere are daily made in a number of our large cities, in which localities clinical records are taken by a number of independent observers, to ascertain the initial date of acute diseases. Reports of progress have been made, but sufficient data have not yet been secured to warrant any general conclusions. The committee desire a wider interest and assistance in the further accomplishment of a work which promises to be of great value.

[1] "There is much evidence in favor of adopting the analysis for oxygen, instead of that of carbonic acid, as a test of atmospheric purity; the test would be an absolnte one, if we could be sure of the uniformity of the proportion of oxygen in pure air. Taking this, as we probably may, for granted, we can say that the carbonic acid, in most cases, increases directly at the expense of the oxygen of the air, and therefore a diminution of oxygen points logically to an increase of carbonic acid. There is this disadvantage in taking the oxygen test, it removes from view the accidental impurities, such as the discharges from chimneys, which are certainly important."

Carbonic acid is a product of combustion, and in its formation represents in nearly fixed ratio the destruction of oxygen. The entire animal kingdom is constantly consuming oxygen and emitting carbonic acid, and atmospheric conditions dangerous to life would ensue, were it not for the equilibrium maintained by the consumption of carbonic acid and generation of oxygen by vegetable growth. Owing to the remarkable diffusion of gases, the wind currents, etc., the immense amount of carbonic acid poured out into the air as the product of combustion never produces atmospheric changes in any marked degree. It is estimated by Smith that in Manchester, from this source alone, over 15 tons of carbonic acid are produced daily, and yet, when this is added to the product of respiration and animal waste, he found the entire quantity was not sufficient to raise the average percentage above four parts in ten thousand, which is within the so-called normal limits of a number of investigators. The decided increase of carbonic acid in cities is due mainly to the confinement of air in courts and alleys, and the sanitary lesson should be, the construction of wide streets with open courts or squares.

Too much importance has been placed upon carbonic acid as a deleterious constituent of the atmosphere. Very little, if any, annoyance is felt from the accidental escape of pure carbonic acid in the charging of soda fountains, although the air may contain two per cent. of the gas. Förster states that he had no difficulty in remaining ten minutes in a cellar containing fermenting wine, although the carbonic acid gas amounted to forty parts per thousand.

There is a vast difference when the oxygen is lessened in proportion as the carbonic acid is increased, as, for example, the entering of a chamber where candles are burnt until extinguished for want of oxygen, or again, where the carbonic acid is produced by respiration. The presence of this gas in living-rooms in any appreciable quantity is of the first importance, not so much as a deleterious chemical agent, as because of the bad company in which it is found, and the presence of which it indicates. One serious objection to the numerous gas jets of the brilliantly lighted salon and audience room is found in the fact that the ordinary burner consumes as much oxygen as four persons. From a sanitary standpoint, lighting by electricity will be a great gain, and this evil will be obviated. One large room in a Lowell mill, lighted by 400 gas burners, had been ever a source of complaint in its defective ventilation and great heat. Lighted by electricity, the change was surprising, while the difference in temperature was over twenty degrees.

Products of decomposition from cess-pools, the organic exhalations from respiration, the lessening of oxygen from the combustion which is going on in brilliantly lighted rooms, all these are dangerously infective and devitalizing elements which demand a system of ventilation usually ignored in modern house-construction.

From the address upon State Medicine before the American Medical Association at St. Paul, 1882, by Dr. Gihon, Medical Director, U. S. N., I quote, all too briefly, "So long, however, as society in its highest development of rank and culture, ignorantly jostles and wedges itself in contracted parlors and drawing-rooms, already defiled by blazing gas-jets and defective furnaces, where hundreds of lavishly dressed human machines befoul the air and poison one another with the noxious gases and their own effete animal products in deadlier quantity than the ragged rabble which herd in the open street, and call this pleasure; so long as godly people drowse and yawn in badly ventilated churches surcharging their brains and impairing their minds with blood not half ærated, and ungodly ones exhaust their whole reserve force to resist the insanitary influence of the no less badly ventilated theater and exhibition hall, and call the one pious worship and the other rational amusement; so long as men toil to amass riches and then build residences palatial, or sham palatial, and in the name of luxury and æstheticism flood them with artificial

[1] The Atmosphere. By D. F. Lincoln, M.D, Ziemssen's Cyclopædia, Vol. xviii, page 605.

light and heat to consume the oxygen which prince and beggar must breathe, and admit the invisible filth by the sumptuously decorated closet and bath-room by which they think to exclude the vile necessities of humanity which prince and beggar alike cannot escape, and call this comfort and refinement; so long as our children are sent to overcrowded and unwholesome schools, where their eyes are bleared, their hearing dulled, their plastic bodies distorted and their brains fuddled, and call this education; so long as men and women violate daily in themselves and in their children the simplest precepts of hygiene, parents countenancing half-dressed daughters wearing out their strength in unwholesome ball-rooms, seeking their slumber that cannot refresh only when dawn appears; sons launched upon the world to encounter physical wreck in a thousand channels where no beacon warns of danger; old men, senators, judges, divines, perchance learned doctors, uncomplainingly breathing the foul air of public conveyances and apartments in which every door and window have been carefully closed and ventilator carelessly ignored; streets reeking with filth which decrepid laborers play the farce of sweeping in broad daylight; what can State Medicine hope to accomplish in legislative chambers and halls of Congress which are themselves *even* evidences of sanitary ignorance, sanitary neglect and sanitary indifference?"

The foreign ingredients of the atmosphere are very various; as dust they are carried great distances by the wind and deposited often hundreds of miles from their source. African organisms have been found in the air of Berlin. It is often difficult to obtain air free from the pulvurulent debris of vegetation, and both vegetable and animal organisms abound. From the vegetable kingdom come pollen, vegetable hairs, fibers, scales, cells, seed capsules, etc., also spores of fungi and various forms of bacterial growths in marvelous abundance. In the air of living-rooms we may find portions of food, animal and vegetable fibers, pus globules, fatty crystals, scaly epithelium, and a number of the micro-organisms.

[1] Dr. Sternberg, in his report to the National Board of Health, says: "The fact, observed by myself, that during the summer months the mud in the gutters of New Orleans possesses an extraordinary degree of virulence, shows that pathogenic varieties of bacteria are not alone bred in the bodies of living animals. The more I study this subject the more probable it seems to me that in this direction lies the explanation of many problems which have puzzled epidemiologists, and that the sanitarians are right in fighting against filth as a prime factor in the production of epidemics; a factor of which the *role* is easily understood, if this view is correct. The presence of septic organisms, possessing different degrees of virulence depending upon the abundance and kind of pabulum furnished them, and upon meteorological conditions more or less favorable, produces, in my opinion, the *epidemic constitution of the atmosphere*, which wise men were wont to speak of a few years ago as a cloak for ignorance. It must be remembered that the gutter mud of to-day, with its deadly septic organisms, is the dust of to-morrow, which, in respiration, is deposited upon the mucous membrane of the respiratory passages of those who breathe the air loaded with it."

The spores of certain forms of these lower orders of vegetation have a remarkable vitality. They are of extreme minuteness, often less than a two hundred thousandth of an inch in diameter and have resisted a dry heat quite above boiling water. Tyndall was the first to make popular the test of a beam of light through the air as one of the best to show the presence of minute particles. Indeed, it is only owing to these particles that the beam of light is revealed, for in purified air it ceases to be visible, and air thus purified no longer possesses the power of exciting putrefaction in albuminous fluids previously sterilized. From the almost universal presence of these minute forms of micro-organisms and their difficulty of exclusion arose the belief in spontaneous generation. Owing to a better knowledge of these organic constituents ever present in confined spaces and the dangers therefrom to wounds, has arisen the revolution in surgery during the last decade.

By a slower process because beset with far greater complications and difficulties, there is being surely evolved the so-called germ theory of disease which, although not dependent upon the atmosphere alone for the spread of contagion, is the more usual medium for the dissemination of infection. The organic matter exhaled from the lungs is molecular and is disseminated by atmospheric currents. The odor from the decomposition of these organic elements is generally perceptible when the carbolic acid reaches 7 parts in 10,000, and is strong when it amounts to 10 parts. The microscopic examination of these exhalations into the air of crowded rooms, when condensed with the vapors upon the cold glass of the window often shows them to be undergoing decomposition, in the process of which are developed confervoid growths intermingled with myriads of bacteria and micrococci. One danger from tuberculous patients may be found in the careless disposition of the sputum. This not seldom falls to the ground, is pulverized and distributed as dust. In respiration of the atmosphere thus infected the bacilli are lodged upon the mucous membrane of the lungs. In the laborious researches recently published of M. Vignal, of Paris, upon the bacillus of tubercle, he dried in a flat recepticle some sputum containing bacilli; this he afterwards pulverized, then moistened and subsequently dried. The specimen was in this way moistened aud dried eight times, and the bacilli were as abundant as in the fresh sputum.

Owing to the multiplicity of agents and causes rendering air impure, its analysis has, as a rule, been very uncertain and unsatisfactory. The term albuminoid ammonia, much used in the analysis of air as well as of water, has usually represented a whole series of of unknown factors. Like amaurosis of the eye by the older writers it gave a learned phraseology to ignorance and disfigured science, much in keeping with the making of the geographical map of our boyhood, where the vast unexplored region of the terri-

[1] Special Report to National Board of Health, April 30, 1881.

tories this side of the Rocky Mountains was called the Great American Desert.

It was first noticed by Gay Lussac that all the nitrogen of organic matter when heated with caustic hydrates appeared as ammonia. Albuminoid compounds, when disorganized by the growth of the lower forms of organisms, set free ammonia, and the quantity of the free ammonia may, in a general way, serve as a standard to indicate the amount of decomposition which *has* taken place.

The term albuminoid ammonia, on the contrary, stands for the quantity of nitrogenous material in air or water which *may* serve as food for the growth of these infinitesimal organisms. This as yet undecomposed organic matter is not by any means in itself necessarily hurtful, although always objectionable. Combined with moisture at ordinary temperatures, it furnishes the condition for bacterial growth and may prove sufficient for the development and spread of an epidemic of some one of the class of contagious diseases. We can have no chemical test for discriminating between hurtful and harmless organic matter, since the poisonous infection is *vital* and where found must ever be looked upon with suspicion.

I take great pleasure in referring to the microscopic investigations of atmospheric impurities by Surgeon J. H. Kidder, U. S. N., Washington, published in the report of the Surgeon-General U. S. N. 1881, and continued in report for 1882 by Passed Assistant Surgeon T. H. Streets.

The material for examination was collected by the use of a funnel-shaped instrument connected to a winged vane causing the opening to face the air current, which is made to impinge upon a slide placed horizontally, a portion of which has been moistened in glycerine. In out-of-doors air thus collected and examined. he enumerates the following substances as the most important:

1. Epithelium from the skin and mucous membranes.
2. Vegitable epithelium and unrecognized debris.
3. Hairs and threads of various fabrics.
4. Particles of sand, glass, metals, soot and starch.
5. Parts of the chitinous shells of small insects.
6. Bits of feathers and the pappus bristles of composite plants.
7. Minute, highly refracting dots, simulating *micrococcus*.
8. Crystals of various forms and sizes.
9. Pollen spores of many different kinds.
10. Leaf hairs.
11. Mycelium and spores of fungi.
12. Nucleated cells resembling leucocytes.
13. Bacteria, as *bacterium*, *vibrio*, *bacillus* and *micrococcus*, and under the forms of aggregation known as *zöoglaca*, "swarms," *leptothrix* and *torula*. Dust collected dry, by simple exposure of slips and disks to the air, contained sand, soot, etc., and numerous crystals, mostly rods and radiating needles. And, finally, the disks and tubes containing collections made in hospital wards abounded in epithelium, starch, cells resembling leucocytes, and threads and hairs. Epithelium, as appears from the foregoing summary, is always and everywhere present in the air. Considering the probability of the communication of contagious exanthemata by this mode, the constant presence of epithelium in the air becomes a fact of considerable hygienic importance.

Minute, highly-refracting dots, very numerous in winter dust, are likely to be mistaken for *micrococcus*, especially when mounted in fluid and agitated by the Brownian movement. "They are usually the most minute parts of coal ashes, and may be distinguished from organic forms by the fact that they are not affected by strong sulphuric acid. After a long series of observations I am, however, constrained to believe that there is no absolute reliance to be placed upon identity or similarity of form in the recognition of crystals occurring in dilute solutions."

In the sanitary investigations of Dr. Streets, the cultivation of the organisms of atmospheric dust gave most interesting results. The rare form of *bacillus ruber* accidentally appeared in some of the culture tests and was made the subject of a number of laboratory studies and from their cultivation the air of the laboratory became so completely infected with them that unless extraordinary care was exercised they appeared as a pervading element in all cultures.

From my own laboratory studies I have been made aware of the great difficulty in excluding germs during the manipulation of sterilized nutrient fluids. To the special student, Dr. Street's observations are of great interest. I cannot forbear quoting concerning his growing the bacillus ruber upon rice under a bell jar in a darkened room. Whenever the bell glass was removed the nostrils were greeted by an agreeable odor of apples; several persons noticed it. * * * The bacillus (Beck's No. 10 immersion) was shown to be in single rods or two joined together, rarely four or more united. Each rod enclosed two brightly refracting granules usually one at either end. The movement of the rods was active and perpendicular to the stratum of liquid in which they swam; moving points only were seen coming apparently in contact with the thin glass cover, as their motion became less active the rods floated horizontally in the liquid.

A proper discussion of the impurities in water would far exceed the limits of this entire paper. Chemically pure drinking water is neither necessary or wholesome. Soaking into the earth certain mineral constitutents must be present in varying quantity. These have long been recognized and may be easily determined. In all natural waters there is more or less organic matter in solution. This is reduced to the minimum in the supply from springs and deep wells properly protected. Organic material may not be harmful, dependent upon its character; dissolved vegetable material may deeply color the water, or the low form of algæ give it a very disagreeable taste without being especially harmful; on the contrary clear, sparkling, tasteless water may contain impurities in the highest degree dangerous. Water containing albuminoids in solution, if allowed to become standing is sure to undergo deleterious changes, from its infection by the ever present atmospheric germs which utilize these products as food and reproduce in num-

bers utterly beyond conception. It is owing to such infection that the water draining from swamps and marshes, especially in hot climates has ever been a prolific source of intestinal diseases.

As in the discussion of atmospheric impurities, we found the ever-present moisture an important factor, so in the treating of the water supply, soil pollution must be necessarily therewith taken into consideration. In this relation no question is more important than the power of the soil to purify water by filtration and the retention therein of injurious products. The albuminoid compounds may here be utilized as food for the higher order of plants, and thus be extracted from aqueous solution. Under the influence of sunlight oxidation destroys many of the lower growths, and air and water both thus become purified. It has long been recognized that certain soils in time loose their ability to filter out the impurities from polluted waters. Many cases of disease and even epidemics have been traced directly to the use of water containing sewage that had passed a greater or less distance through the soil. It is apparent that this danger has been greatly underestimated by all classes. The specific contamination of the ground water and thereby of the supply for household use, is the more common and wider spread source of certain of our most dangerous diseases, the example of which best known is typhoid fever. It is also an established fact that the air which every where permeates all soils to the ground water moves in consonance with every barometric change of the outer atmosphere; these air currents, also modified by heat, are of importance from a sanitary stand point. Every vault, every cess-pool, is a source of pollution, and these sub-soil air currents are drawn into our cellars from all directions when they are used as is the custom in most of our northern cities, as the source from which the heat in winter is destributed through the house.

The recognition of this danger caused the National Board of Health to institute a very elaborate series of investigations in order to determine the extent to which different soils are able to filter the injurious properties out of the air passing through them. The most interesting report upon "the relation of soils to health," by Profs. Smith and Pumpelly can here only be referred to. Their conclusions show the utter worthlessness of sand as a filter for germinal matter. Our government in no wiser way could aid in the general well-being of her citizens than by the continuation of such investigations.

"The facts here brought out seem to us of importance considered with reference to the sources of supply of our drinking waters; the relative location of wells, cess-pools, etc., in our towns; and also with references to the methods of removal of excreta, especially during the prevalence of an infectious disease, the infectious materials of which may be communicated through water. A good bed of sand has sommonly been regarded as one of the most efficacious forms of filters, amply protecting our well water against all contamination, even though the wells be sunk at no remore distance from sewers, cess-pools, cemeteries, etc. But we see that sand utterly fails to remove germs of putrefaction, such as are normally found in the air and in water from liquids while its power of absorbing dissolved matter, organic or inorganic must also be seriously questioned."

The subject of germ transmission through the soils demands on the part of sanitarians the most searching investigation, not only on account of the possibility of contamination of our drinkicg waters, through infiltration of germs, but also because the air especially in our dwellings may become infected if the soils in their natural condition possess no power of retaining germs or their adult organisms. For whenever in an infected soil the ground water from any cause rises to the surface, germs may be carried with it, and upon drying be taken up by the atmosphere."

The importance of a supply of pure drinking water cannot be over-estimated, and its pollution is in a very large degree due to germ contamination. This is no exception even in sparsely settled country districts. In New England, almost entirely exempt from malaria, the danger from specific contamination of the drinking water is shown in the marked increase of typhoid fever. In Massachusetts alone there occurred, from 1840 to 1880, 390,000 cases of typhoid fever and 40,000 deaths.

In the military service, during the late bloody contest between the States, zymotic diseases caused a larger number of deaths than resulted from all the battles of the entire war. We quote from the report of the Surgeon General: "The entire number killed in battle and died as the result of wounds was 93,443; died from disease, 186,216; died from zymotic diseases alone, 108,666." If to these hecatombs of victims, sacrificed in the vigor of early manhood, we add the suffering represented by over 1,700,000 reported cases of diarrhœa and dysentery, and 1,100,000 cases of malarial fever, every village and hamlet of our broad domain still having its representatives of wrecked humanity from these causes, we gain some idea of the dangers resulting from insanitary conditions, although our armies were in service in a mild climate, and the best clothed, fed and housed soldiery the world has ever seen.

The number of deaths in the United States during 1880 from diphtheria alone, was 38,398, a proportion of 51.33 per 1,000. From typhoid fever there occurred 22,905 deaths, a proportion of 31.21 per 1,000.

These terrible scourges, like consumption, are the messengers of death which make their daily visitations, and to which people have become so accustomed as to regard their ravages as the inevitable, or, as the clergy have been wont to express it, "the hand of divine Providence laid heavily upon us." The medical profession talk learnedly of the wise means adapted to the cure. Different schools of pharmacists have their vaunted remedies, but the sad, humiliating lesson of the mortality tables teaches that these invisible monsters are stalking broadcast over the land, seizing prince and beggar alike in their remorseless grasp.

Since the history of man, the wise of all generations have sought for the cause of disease, yet it would

[1] Supplement No. 13, National Board of Health Bulletin, p. 18.

appear that the key to many of these labyrinthian mysteries has been reserved as one of the triumphs of science for the latter part of the nineteenth century. It is now generally conceded that the danger to wounds is a particular organic infection, which, like the virus of inoculation or vaccine, germinates, and induces systemic poisoning. The whole subject of modern wound treatment is based upon the recognition of this ever threatening danger, and securing the best means of its avoidance. This recent recognition of the dangers from the simplest form of microscopic vegetable growth, has evoked the important question of the means best adapted for their destruction. Extremes of heat and cold are by far the most universal, and are the wise measures which nature has adopted as limitations to their development. For a long time carbolic acid has been the surgeon's *sine qua non*, and the agent most trusted for the disinfection of the sick-room. A long series of careful laboratory investigations conducted under my supervision have given results not unlike those of Koch and Sternberg, and place the bichloride of mercury pre-eminently at the head of the list of germicides.[1] The solution of one part to 2,000 [illegible] Upon trustworthy as the 1 to 20 of carbolic acid. Properly marked to guard against danger, such a solution may be wisely brought into requisition in every household. Under the light of its new values, preparations of mercury in certain diseases are likely to be restored to their old-time professional confidences, and teach that the clinical deductions of the fathers were not without foundation in fact.

The first of the diseases, and the one the clear history of which is perhaps the best known, is anthrax, or malignant pustule. Here the rôle of specific microorganisms as cause and effect has been conceded. No more interesting subject could command attention than the analysis in detail of the entire group of zymotic diseases. In a purely conservative sense it is not too much to claim, that it may be shown that each of these affections has its origin from, and owes its dissemination to, a *contagium vivum* of a definite, particular character. We do not, however, intend by this to convey the meaning, that our knowledge as yet, if ever, enables us to differentiate each individual factor.

In the light of recent astonishing discoveries, no wise man would prognosticate a limit to our future knowledge in this direction. Certainly, the greatest progress in medicine since the days of the fathers is this pertaining to the causes of disease. It is not too much to predicate as possible, or even probable, that the medical art, in the near future, will hold control over the entire class of zymotic diseases as effectually as vaccine has controlled and relegated to an almost hypothetical danger the terrible scourge of small-pox, which ravaged humanity during the many centuries of the historic past.

The laborious researches of our distinguished friend, Dr. Henry I. Bowditch, in establishing the relation of soil moisture to consumption, builded for himself a monument more grand and enduring than granite or bronze. The ineffable something, of the existence of which he was equally sure, remained for younger eyes to discover, and the patient, painstaking labors of a well-trained German student to demonstrate the specific bacillus tuberculosis.

It is very probable no publication of modern time has awakened so much discussion or caused the undertaking of so great an amount of study and investigation. Dr. H. C. Ernst, of Boston, read an exhaustive paper in part—a Contribution of Laboratory Work, before the Massachusetts Medical Society in June last. He made a table of references to fifty publications upon the subject, and I am quite sure I have seen nearly one quarter as many more articles published since this date worthy of reference. Dr. Ernst's conclusions are as follows:

I. A staff-shaped micro-organism exists in all forms of the tuberculous process, and its presence has been demonstrated in them.

II. It is more abundant in the rapid than in the slow form of the process.

III. Its specific nature as the cause of tuberculosis is claimed by Koch on the ground of his observation.

IV. Its specific character has not been successfully refuted by trustworthy observations.

V. Its value as diagnostic evidence of tuberculosis is very great, although its absence cannot be considered as excluding that process.

The latest novelty in the germ theory of disease is found in the ingenious exposition of the yeast fungus as the cause of diabetes, by Prof. Ekland, of Stockholm.[1] It is offered as theory rather than demonstration, and yet the array of facts brought to support this explanation if not conclusive throws at least new light upon this disease which has ever been considered a dark enigma.

Dr. Hassall communicated a paper upon the Development of Torulæ in Urine to the Royal Medical and Chirurgical Society of London, in 1853, in which he arrived at the conclusion that there is a species of fungus which is developed in urine containing even minute traces of sugar which may be considered characteristic since it occurs in no other condition of the urine. Dr. Beale[2] says: "This is the sugar fungus. But neither the character nor the occurrence of the fungus are sufficiently constant to enable us to accept implicitly Dr. Hassall's conclusions as to its value as a test for the presence of sugar. The sugar fungus which grows in diabetic urine is identical with the yeast plant." From the above it would appear that both Drs. Hassall and Beale believed these organisms developed only after the exposure of the urine to the atmosphere.

In the archæological museum in Cambridge may be seen whole series of adult skulls from certain of the prehistoric races of South America with perfect teeth. The mouths so well furnished are also closed to our interogatories of the why. The last generation of Americans living upon hot bread and fried meats might have been described as a teeth-aching race. Our native genius rising to the necessity of a felt want evolved a new profession, earlier

[1] See *American Medical Association Journal*, August, 1883—Germicides and Their Relative Values.

[1] N. Y. Medical Journal. July 28, 1882.

[2] Kidney Diseases and Urinary Deposits. Third edition, 1870, p. 323.

called the dentist, now the dental and oral surgeon, and the present generation may be styled a teeth-preserving and teeth-manufacturing people. An army of ten thousand trained specialists are busily engaged at an estimated annual cost, in the United States alone, of from forty to fifty millions of dollars. In the highest consideration this is a very imperfect compensation for the damage done these comparatively minor members of the body by the ever present micro-organisms which riot in this usually filthy cavity. An antiseptically clean mouth and our dentists would become rivals of the historic McCawber, and dyspepsia be placed at the bottom of the lists of diseases.

A blind man no matter how well armed and how active is a dangerous ally; his blows may fall equally upon friend and foe. How can one who is blind as to causation direct as to the prevention of disease?

The fundamental basis of all sanitary law, and I may also say of the treatment of disease, lies in the aquisition of such causative knowledge. The application of sanitary law to city life must demand an atmosphere reasonably free from the defilement of of organic waste. This necessitates a system of sewerage which shall continue from the house in a steady unbroken current to its discharge at a safe distance from habitation. This current should be of sufficient rapidity to prevent sedimentation, and deliver the house products before time sufficient for putrefaction, even in summer, has elapsed. This can never happen in the systems now in use in those cities situated upon the sea shore, since here the sewers are practically tide-locked a large fraction of the day, and a cessation of current with sewerage deposit must ensue, while a backward pressure is necessarily produced upon the sewer air which, loaded with organic products, must escape into the house through any one of the water traps now in use.

Sewer-gas poisoning, which means air changed not so much in its chemical constituents as defiled by organic impurities, is thus by no means in our best constructed houses a hypothetical danger, here often the greater, for the costly luxuries of water-closets and basins are each a standing menace, and are to be regarded with suspicion. Boston which has and yet continues to drain into its back-bay and harbor its sewerage by more than fifty outlets, is upon the eve of inaugerating its new system at an expense of nearly $5,000,000, by which the sewerage is to be pumped into a storage reservoir situated upon Moon Island and discharged into the out-going tide, and thus protect the harbor from defilement by sewer drainage.

The wise political economist and world renowned historian, Mr. George Bancroft, in discussing the future of civilization, once said to me: "I look upon New York city as the future commercial metropolis of the world, a great center of ten or fifteen millions of inhabitants." This prophecy of years ago has gone on towards a steady fulfillment, until, like London, she exacts tribute from the entire world. Situated upon a narrow neck of land between a mighty river and a deep bay, it would seem that good soil-drainage would be most easily secured; and yet her sanitary authorities state that the imperfect, incomplete, and broken sewers have caused the soil of whole districts to become so charged with sewage that the saturation point is reached. Nearly four millions of people pour their waste into the river and harbor, as is most convenient, while miles of her shores are fringed with wooden wharves built upon piles, not alone themselves undergoing decay, but a fertile source of detention of putrefying material. The New York physician will tell you that, no matter what disease he has under treatment, it is with the added factor of malaria from such defilement. Rich and poor must alike suffer from such danger, and if the prophecy of America's distinguished scholar is to be fulfilled, New York must take her sewage out of the harbor, and rival Liverpool with docks of solid granite for the merchandize of the globe.

The water supply must ever be pure and ample. The extraordinary expenditure necessitated by most cities has made water a costly product. Rivers and lakes in sufficient proximity for such use are liable to defilement from [illegible] towns and manufactories, and only by the greatest vigilance can pollution be prevented. Boston has freely expended her millions upon a water supply confessedly inadequate in amount, and of a character which is a constantly recurring source of complaint and danger. Much of her water supply is retained in artificial shallow storage basins, from which the surface soil was never removed, and whose water-shed comprises a very considerable population; and Natick, with its 8,000 people, still drains its waste into Lake Cochituate, the original source selected for the city supply.

The Board of Health returns for Boston, August, 1883, out of a total of 521, gives from zymotic diseases alone 194 deaths, while 135 cases of typhoid fever were reported.

For September, a total mortality of 765, there were 253 deaths from zymotic diseases, and 215 cases of typhoid fever reported.

With astonished gaze the traveler views the great arches spanning and crossing the Campagna, which once bore to old Rome the pure waters of the distant Albian mountains. The last generation of scant population, with singular energy and foresight, at the behest of commerce, wedded by a water way, more than three hundred miles in length, the great lakes with the Hudson river. The twentieth century will exhibit yet greater marvels for the securing of pure water. The project is already under discussion to supply the great metropolis from no nearer source than Lake George, with the thought of protecting its water-shed from further pollution, and carrying its pure, sparkling water to the thirsty city at an estimated expense of no less than two hundred millions of dollars.

The danger from the dead must not be forgotten. As we invite our friends to sympathize in our sorrow let it not be to their peril. Revive, if need be, the custom of Egyptian preservation or re-inaugurate the use of the Roman funeral urn, but do not sow the seeds of an epidemic of the ever prevalent contagious diseases by our present display of decomposing remains, adorned as if for a reception. Let the

genius of some sanitarian devise a casket, at once hermetically sealed, rather than do violence to time-honored custom or shock the deepest and most sacred feeling of broken hearts by urging cremation. The public health act of Great Britain makes the holding of a "wake" over the body of one dying from contagious diseases subject to a fine of five pounds. Let American authorities equally protect from similar dangers.

We turn reluctantly from the consideration of questions having so great and vital an interest to the medical profession, and of primary importance to the entire animal kingdom. If Rip Van Winkle experiences be granted to us in the twentieth century, with little aid of the prophetic power we may forecast some of the advances then made known to us of our science. In the light of past history, with its fashions and foibles of the *medicamenta*, few would presume upon the mission of its pellets and powders.

Surgery and sanitary science are, however, based upon entirely different factors of our knowledge and must remain the great corner-stones of a divine art, as wide-reaching as humanity. Upon these shall be builded the grand Æsculapian temple of the future, where will be taught a science foreshadowed in the deeds of the great Galilean Master.

The citizen must not be lost in the physician. A Republican Government demands service of all. As I turned from the motley crowd in Castle Garden I shuddered at the thought that these men were so soon to be my peers in our government, but the bright-eyed children, hiding in the scanty skirt of the mother, looked hopefully up, as if to say, "Welcome us in our escape from the oppression and over-crowding of the centuries." Then came the vision of our broad domain scattered all over with school-houses, academies and colleges. Rosy-hued with health, in youthful vigor, our women in tens of thousands have devoted their best years to the training of the young. Four hundred American colleges and universities with open doors invite to a higher education. Universal knowledge is the Republic's only safety, and further needs have only to be made known to be liberally met by the generosity of the American people. The necessity for research and pure science are recognized as never before, and may the day soon come when our youth will no longer require for their best development and higher education, European training.

Be it our bounden duty as physicians to disseminate to the masses proper instruction in the cardinal virtues of right living, and to demand from our government wise sanitary laws, both State and national, in the enforcement of which every house shall be builded and maintained as sanitarily safe as architecturally; rich and poor alike abundantly supplied with pure air and water, and have their habitation upon an uncontaminated soil."

NAPHTHOL--ITS MEDICINAL USE AND VALUE.

BY JOHN V. SHOEMAKER, A. M., M. D., PHYSICIAN TO THE PHILADELPHIA HOSPITAL FOR SKIN DISEASES, LECTURER AND INSTRUCTOR ON DISEASES OF THE SKIN IN THE SUMMER SCHOOL AND POST-GRADUATE COURSE OF JEFFERSON MEDICAL COLLEGE.

Read before the Philadelphia County Medical Society, Wednesday evening, October 17, 1883.]

Naphthol is one of the remedies of recent introduction, and of the two products of that name the B napthol is the one which was first used by Prof. Kaposi as a substitute for the tar preparations in skin diseases. It was thought by him as the essential and curative ingredient of tar while it was free from any objectionable features of the latter.

My attention was directed to this remedial agent by Dr. Justus Wolff, a chemist largely interested in the manufacture of coal tar products, who kindly furnished me a paper on the chemistry of this substance along with some novel properties which he had observed in it. As this paper, however, is too long for reproduction here in its entirety and besides is largely of chemical interest only, I will here give it briefly in abstract, as far as it will be necessary to acquaint us with the chemical character of its subject, as follows: Naphthol is a derivative of naphthaline, a hydrocarbon found in large quantities in coal-tar, belonging to the so-called aromatic group. In the fractional distillation of coal-tar various hydrocarbons are obtained at different degrees of heat. Thus at 80° C., Benzol distils over, between 80 and 110° C. Benzol and Toluol mixed, at 111° C., Toluol alone, from 111 to 136 Toluol and the different xylens mixed, from 136° C. to 142° C. Xylens only, then the Cumenes, Phenol and Cresols and at 218° C. Naphthaline which sublimes in colorless, transparent, brilliant crystalline plates possessed of a disagreeable pungent odor, the empyric formula of which is C_{10} H_8.

Naphthol is produced from this by a substitution of one of the hydrogens in naphthaline by one molecule of hydroxyl. = O. H.

According to the different positions of the hydrogen substituted in the naphthaline by the hydroxyl two different naphthols are obtained of which one is called α naphthol and the other the one we shall alone speak of hereafter is the B naphthol of the formula C_{10} H_7 O. H.

The naphthols demonstrate the advantage of a knowledge of the relative and positive positions of substitution in order to understand the cause and constitution of the different offsprings from single or compound constitutions.

The method of producing naphthol is like the general process employed in effecting hydroxyl substitutions by first producing monosulphs, substitutions by means of strong sulphuric acid at certain temperatures and melting the monosulphonated compound with sodium hydrate, the ordinary dry caustic soda. In the case of naphthaline treated thus with sulphuric acid the naphthalen-monosulphonic acid is produced

according to the following formula: $C_{10}H_8 + S.O_4H_2\ 2C_{10}H_7S.O_3H + H_2O$. Which on being melted with sodium hydrate yields naphthaline hydroxyl or naphthol, as per formula herewith:

$C_{10}H_7S.O_3H + 2(Na\ O\ H) = C_{10}H_7S.O_3Na + OH_2 + NaOH = C_{10}H_7OH + S.O_3Na_2 + OH_2$.

According to the different temperature employed in the sulphonation of the naphthaline, either α or B naphthol are derived by the last process. The naphthols thus produced are usually purified by distillation and brought in the market as crystalline masses of a reddish color and a disagreeable and pungent odor, as shown in the specimen herewith submitted.

The naphthol B crystallizes in scale-like clino-rhomboidic laminæ from watery solutions; whilst in a molten state it represents clino-rhomboidic prisms. It dissolves in 520 parts of water at 60° F., and in 75 parts of boiling water. It is readily soluble in alcohol, ether and chloroform. An aqueous solution is colored yellow by chloride of lime and by heating this solution yellow flakes separate. It melts at 122° C. (Shaeffer) but a mixture of both α and B naphthol melts at a lower temperature than either alone. Compounds with alkaline metals or ammonia, and alkaline earths are not stable and separate easily either by evaporation or in contact with carbonic acid.

The naphthols stand in the same relation to naphthaline as phenol to benzol and cresols to toluol. If one of the six hydrogens in benzol is substituted by hydroxyl, phenol is obtained, in the same way are cresols and naphthols formed. By this analogy of constitution of naphthols, phenol and cresols, the inference may easily be arrived at that they may prove alike in their disinfectant character as well; and in order to prove this, I undertook a series of experiments. Of course, the commercial naphthol for that purpose was out of question, and I experimented, therefore, first to obtain a naphthol free from odor. As the crude article contains as contaminations sulphur and sulphurous acid, the sublimates thereof will yield, besides the naphthol crystals, also sulphuretted hydrogen, thionaphtholes, carbolic and cresylic acid, thiophenols, and the like, to which ordinary naphthol owes its pungent and disagreeable odor. I avoided this all by passing a rapid current of steam through its aqueous solution, expelling thus all volatile by-products, and obtained naphthol thus in its greatest state of purity, in beautiful silver crystalline scales, as here submitted. This naphthol may again be sublimed, and obtained then in elegant white crystals, as here shown; but by the heat employed, more or less decomposition again takes place, and renders the product somewhat disagreeable and pungent.

In order to test the disinfectant and antiseptic properties of my inodorous naphthol, I added one part thereof in powder form to 480 parts of urine, which, at the expiration of six months, at a varying summer temperature, manifests no odor or signs of decomposition; while another of the same urine, without addition of naphthol, had a strong, putrid odor already, after standing for three days only. To this latter I added, after standing thus for eight days, some of my inodorous powdered naphthol in the above mentioned proportion, and in twenty-eight hours it had lost its putrid odor, and has kept thus up to the present writing, when no putrefaction or signs of it can he detected in either specimen. The same experiments I have made with meat immersed in a solution of naphthol in 520 parts of water, as well as in other experiments similarly conducted.

Experiments with the solutions of the compounds of naphthols with alkalies or alkaline earths, prove that these act very much less antiseptic than the solutions of pure naphthol soap containing 4–10 % of free naphthol, were found excellent and serviceable in removing odors of putrefaction or decomposition from hands or cloths. They are also very efficacious in destroying clothes or body-lice, as naphthol is a very active parasiticide. If naphthol is evaporated by means of heat, the air in rooms contaminated in consequence of disease or otherwise, it will be found to be rapidly deodorized and rendered fresh and sweet without other odors, making it thus of the greatest value for sick rooms, hospital wards, dissecting rooms, etc.

As carbolic acid has many disadvantages, and is not the deodorant or antiseptic par excellence, the inodorous naphthol can certainly take its place in every respect. As naphthol has been described variously as poisonous and injurious to the animal economy, which by its composition and analogy was not apparent, I felt it my duty to experiment with it in regard to such, and commenced at once without hesitation by taking it internally. One part dissolved in 3,000 parts of water produced at first heartburn, a slight sensation in the right lumbar region, and some dizziness. Of that solution an equivalent amount was taken to represent a half grain.

These symptoms disappeared after continuing its use for some days, and while the urine showed, upon analysis, traces of naphthol and naphthol compounds, no albumen or blood could be detected therein.

The doses then were gradually increased to 4 grains per day for six days, and still no untoward symptoms were discovered, while the warmth in the stomach directly after taking was followed by increased appetite.

Dr. Schofield, of Albany, reports to me that upon my solicitation he has used it largely, at first experimentally, in the Albany Hospital, but that there it has now become a staple article, and is used almost entirely to the exclusion of other disinfectants and antiseptics. They use it there for all kinds of disinfection in wards, sick-rooms, for wounds, etc., and have abandoned carbolic acid in all but a few cases, and always with the greatest satisfaction and success. This for the paper of Dr. Wolff.

His experience, as well as that of Koposi and others, led me, some eight or nine months ago, to employ it both in private and hospital practice, and the success attained with it soon led me to further experiments. I found it to fully sustain the claim that Kaposi had made for it in scabies, psoriasis, and chromophytosis, as well as in some of the chronic forms of eczema, in which it not only allayed the

itching attendant thereto, but lessening the infiltration as well. In wounds and indolent ulcers I have found it a most useful detergent and deodorant, removing the fetor and establishing healthy action of the parts. Aqueous solutions containing half grain to the ounce I have used to great advantage as vaginal injections, especially in leucorrhœa and uterine carcinoma as well as in gonorrhœal affections both in male and female. In diphtheritic throat affections it made a most useful gargle, as well as to remove the fetor of catarrhal and other affections of the buccal cavity. Its greatest value, however, arose from its disinfectant action of the evacuation of fever patients and rooms containing them, while by its absence of odor it did not tend to produce inconvenience both to patient and attendants. Combined with powdered talcum or starch, or both, and dusted into the shoes or stockings of those affected with fœtid exhalations of the feet it acts most satisfactorily, and its effect is equally as good in the same affection involving the hands, axillary and inguinal regions. Combined with other ointments in the proportion of from 1 to 10 grains to the ounce, it not alone preserves the unguent from decomposition, but exercises also an antiseptic action to the parts and the exudation therefrom. A slight admixture to an experimental sample of lard has preserved the same in excellent condition throughout the hot summer months. In chronic psoriasis, particularly when there is great infiltration a 5 to 15 per cent. ointment has frequently been attended with good results. It has also been very effective in squamous and fissured eczema, used combined with lard or gelatin.

To test for myself its antiseptic properties in comparison to that of carbolic acid, I mixed two whites of an egg with equal weight of water, and took one-half of this mixture in one vial, adding one grain of crystallized carbolic acid, while to the other half in another vial I added one grain of Dr. Wolff's odorless naphthol. After the expiration of five days the carbolized albumen assumed a putrid odor, whereas the naphtholized part, though discolored by the naphthol, remains to this day, twenty days after the experiment, without odor. A quantity (about half a pound) of meat already commencing to putrify was also at the same date immersed in a saturated aqueous solution of naphthol, with the effect of arresting the putrefaction and preserving it for some time.

After using naphthol so long and successfully without any untoward occurrences, I read to my astonishment and alarm that Dr. A. Neisser in the *Centralblat fur die Medizinischen Wisdenshaften* 1881, No. 30, reported most extraordinary toxic effects obtained with naphthol and that also Kaposi reported having seen hæmaturia, ischuria, vomiting, unconsciousness and eclamptic attack attacks in a boy after the external application of naphthol. Also that Squire reports in the *British Medical Journal*, January 14, 1882, of it producing blisters and irritating the skin.

Dr. Piffard regards it as a dangerous remedy, and Prof. Rapon while he reports good results with it (*British Medical Journal*, p. 750) in scabies, prurigo, and eczema advises in prolonged cases simple ointment to be substituted every fourth week to avoid any possible risk of absorption.

Dr. Neisser stated that one gramme of a saturated solution (which in water would contain about 1-30 grain of naphthol) injected hypodermically in a dog produced hæmoglobinuria and shortly afterwards death. To verify these accounts and satisfy myself on the toxic effect of pure naphthol if any it possessed, I administered to one rabbit repeatedly in 24 hours 34 minnions of a saturated aqueous solution hypodermatically without any result either as to inconvenience to the animal, increase of his temperature, diminution of his appetite, or causing lethal effect. This method of treatment was pursued for five days, not less than four to five injections being made per day, and the result was still the same. Determined to obtain toxic effects with it and if possible to demonstrate its toxic action by a post mortem examination, another rabbit was fed at first every three hours with one grain pills of naphthol and subsequently with two and four grain pills at the same interval, but beyond increasing the appetite of the animal no special effects were apparent. In consideration of this, one of my assistants, Dr. Charles S. Means, and my student, Mr. F. C. Waterman, volunteered to take naphthol themselves internally, to test, if possible, its action upon the human organization. They commenced with one-quarter of a grain dose every two hours, their pulse, temperature and urine being subjected to the closest inspection both before and after. The second day they took half grain every two hours, the third one grain every three hours, the same on the fourth, while on the fifth and sixth they took two grains every three hours, and on the seventh five grains twice daily. The pulse and temperature did not appear to be affected by this, nor was at any time albumen or blood apparent in the urine. Though they experienced great warmth in the epigastric region after each dose, that passed away in a short time, but left them with slight vertigo, buzzing of the ears with all evidence of cerebral hyperæmia. The alvine evacuations were softened and of mushy consistence, changed to a clay color, and in one of the cases increased to diarrhœa.

Arriving at a resume of my experiments I must certainly proclaim the odorless naphthol which I had received from Dr. Wolf as not a toxic agent, and while I have found it a most useful remedial substance and a disinfectant and antiseptic of the greatest value, it does not in my experience confirm the dangerous influence exercised on the human organism as reported by the gentlemen above quoted, a fact for which I can only account by the greater purity of the material used by me, purified from the deleterious contaminations above enumerated by the process already described, which is not employed abroad, where yet naphthol is sold and used as reddish crystalline masses, with strong, pungent and disagreeable odor. That it is far superior to carbolic acid and other disinfectants and antiseptics I have no doubt, and I am informed that in price it is not alone cheaper than the former, but by its greater efficacy and smaller amount necessary it is certainly more advantageous, aside from its greatest recommendation of

being almost absolutely odorless. It must be borne in mind that all my remarks apply to odorless naphthol, only such as I have exhibited and that I consider that alone as safe for medicinal use.

NERVE-STRETCHING.

[A paper read in the meeting of the Tri-State Medical Society, September, 1883, by H. G. B. Wright, M.D., in behalf of Drs. Johnson and Wright, Olney, Ill.]

In the fall of 1882 we performed our first operation of nerve-stretching. The result was such a phenomenal success, that we became much interested in the operation as a therapeutic process. In order to determine the frequency and results of the operation within the limits of the Tri-State Medical Society, we mailed about two hundred circulars to physicians and surgeons practicing in Indiana, Illinois and Kentucky; a few of them went to Cincinnati, St. Louis, and Philadelphia.

The blanks were printed in such form as to enable physicians to fill in the data asked for with a minimum amount of labor. Of those sent outside the geographical limits of our Society, none were returned. Only five of the circulars were returned, and they contained the data of only twenty-two cases operated on by eight physicians. So far as we know, only two of these cases have been published in the medical journals. Since these circulars were sent to the active men of the States mentioned, and elicited reports from only eight physicians, we infer the operation has not been resorted to by many physicians in this part of the United States.

Of these twenty-two cases, eight were traumatic tetanus, eight sciatica, two paralysis, one locomotor ataxia, one an obscure central nervous disease, one a case of dysasthenia, and one pain following a crushing injury to left arm.

The operation was productive of good in only two of the eight cases of tetanus, one of these recovering, the other receiving decided benefit, but dying several days after the operation, apparently of paralysis of the heart. The cause of the tetanus in the case that recovered was a nail wound of the head, and the median, ulnar and internal cutaneous nerves were stretched four days after the receipt of the injury. In each of the eight cases of tetanus, the nerve or nerves of the affected limb were the ones subjected to the operation, and the cases were all acute, the longest time that had elapsed between the receipt of the injury and the date of the operation being four days, and the shortest seven hours, the average being about two days.

One of the two cases of partial paralysis was a sequel of spinal meningitis, and the operation was purely experimental, and received as such by the patient. The result of the operation in this case is put down as a slight improvement; the other was a case of paraplegia, with cramps in both legs so violent that the patient could not rest. The cramp was relieved in all the muscles except those supplied by the obturator. The patient still has great pain in his back during cold, rainy weather. Dr. Roswell Park, of Buffalo, N. Y., sent us the data of a case of dysæsthesia which had existed for fourteen years, in which he stretched the right sciatic nerve on the 21st of June, and the anterior crural on the 29th, without obtaining any beneficial results.

The case of locomotor ataxia was operated on by Dr. Fenger, of Chicago. It was of two years' standing prior to the operation. The pains were relieved, but the procedure was productive of no more positive good, and the patient died six weeks after.

The cases reported under the head of sciatica constitute a very interesting group because of the large per centum of cures. Those of adult years, those in the responsible period of life, are the persons upon whom sciatica so often fixes itself with painful tenacity, resisting through years the wisest and most considerate treatment. Any harmless procedure that will cure three out of five, or even one in five of such cases, certainly merits our consideration. Two of these eight cases of sciatica are reported as being due to pelvic cancer. The pains were lessened in one, and cured in the other, both patients dying, a few months after, from the effect of the cancer. One of the remaining six cases was relieved for thirteen days, after which there was a gradual return to the condition existing before the operation. This leaves five of the eight cases cured permanently by the operation of nerve stretching, after all other remedies had signally failed. Dr. C. A. Palmer, of Princeton, Ill., operated on one of these—a woman—in 1876, who had been suffering from sciatica for four years. The Doctor writes: "Patient had previously tried every kind of treatment at the hand of every and anybody, but with not only no relief, but positively grew worse all the time. At the date of the operation, on account of suffering, loss of sleep, loss of appetite, etc., she was almost a complete wreck." The operation produced a complete and permanent cure. Dr. Roswell Park, of Buffalo, N. Y., operated in June of this year on a man 26 years old who had had sciatica for five months and had been well treated by the drugs without relief. The nerve-stretching cured him at once, with no return, to date of report.

The case on which we operated was a laborer, of fine physique and previous good health, 45 years old. He was taken in the fall of 1874. During the following winter he could walk but little, but could sit in a chair without much pain. During the first fifteen months he was treated by intelligent physicians of Olney. At the hands of one of these he received sulphate of morphia hypodermically along the course of the nerve for forty consecutive days.

During the winter of 1876–'77, he was treated by intelligent physicians in Decatur, Illinois. In the spring of 1879 he went to St. Louis, and was there treated by means of chemical electricity. Insulated needles were thrust deeply into the thigh along the nerve, and these connected with the battery. He was never treated by quacks. He made a manly effort to regain his health by applying himself to the remedies directed for him by his physicians, but such means were productive of nothing more than temporary benefit, and often were labor lost.

When he came into our professional care, he was unable to walk except on crutches, and his pains were always made worse by efforts at locomotion. His

pain commenced at an uncertain point in the right hip, and extended along the lateral and posterior aspect of the limb to the dorsum of the corresponding foot. His suffering was often intense; at other times a mere feeling of formication; hygienic surroundings not good; skin clear and pale; tongue furred; appetite capricious, and he had constipation, alternating with diarrhœa. His sleep was much broken. We gave him citrate of iron in sherry wine, cascara sagrada, sulphate of morphia, iodide of potassium, strychnine, arsenic, etc. At our hands he received a large number of injections along the course of the affected nerve of from 20 to 60 minims of chloroform. From these he received decided relief, but it was evanescent. We also gave him deep injections of sulphuric ether, but with less benefit.

In November, 1881, we applied the white-hot iron over the course of the nerve, each application remaining long enough to destroy the skin, and the spots were immediately painted with strong carbolic acid. This process was again repeated in January, 1882, and again in March.

Each application was productive of good; after the third a complete cure was thought to have been effected. During April and May, 1882, he moved about without pain, but close confinement to the damp, ill-ventilated chamber of his sick wife and daughter impaired his general health, and he began to have pain along the course of the left sciatic nerve. He could map out the true course of this nerve through the guidance of his pain with as much accuracy as an accomplished anatomist. In June, of 1882, we applied the actual cautery to this limb but it did no good. In July we used flying blisters with no better results. In October, 1882, we anæsthetized our patient the fifth time and cut down upon the nerve just below its usual point of bifurcation in the lower third of the thigh. Having lifted it out of its bed in finding nothing abnormal about it we stretched it by pulling it from above downward and from below upward.

The force exerted was very considerable. The wound was dressed with carbolized oil. Active inflammation soon followed, and his temperature ran quite high. There was alarming constitutional disturbance attended by the formation of pus in different parts of the thigh and calf which burrowed extensively requiring several counter openings to secure its escape.

The inflammation was so great and involved so much of the limb that we were of the opinion it was due to other than the clean cut wound made to reach the nerve. From the moment of the operation to the present, eleven months, he has been absolutely free from sciatica. He has thrown away first one crutch than both of them and then his strong cane and now walks by the use of a slender stick, but he has a slight halt, due to the adhesive inflammation following the operation. For several months he has been earning good wages at manual labor.

After suffering eight and a half years and resorting with confiding and heroic perseverance to the treatment of good physicians he has nerve-stretching to thank for his restoration.

The prominent facts worthy of special consideration, as shown by the data of these twenty-two cases, may be expressed in a few sentences.

1. The operation was productive of good in only two of the fourteen acute cases, while it was beneficial to a greater or less degree in seven of the eight chronic cases.

2. The nerves of the upper extremities were stretched in the acute cases and those of lower extremities in the chronic.

3. The procedure had no effect on the case of dysæsthesia of fourteen years standing, this being the only one of the chronic cases on which the operation was a complete failure, the result of the case of sciatica following spinal meningitis being set down as only a slight improvement.

4. The five chronic cases reported cured were sciatica.

5. No unpleasant results are reported as having followed the operation, except those in the case operated on by ourselves.

These facts are certainly reassuring and take away from the operation the phantom of danger that might cause many an anxious physician to withhold the knife and allow his patient to suffer through months, and even years, and it adds another justifiable resource to the many with which we have been fighting neuralgias, especially of the sciatic nerves.

REPORT ON LAWS REGULATING THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA.

BY RICHARD J. DUNGLISON, M.D., AND HENRY O. MARCY, M.D.

[Report of a Committee read before the American Academy of Medicine at New York, October 10, 1883.

The progress made in the legislative restriction of medical practice in the United States since your Committee was appointed, three years ago, to report upon the subject, has been both notable and salutary. At that time the propriety of establishing such laws was under active discussion, and weak enactments, temporizing in character and but partially effective in their action, were evoked from tardy and timorous legislators in several of the States of this country, as compromises between a sense of the necessity of doing something to protect the health of their constituents and a consciousness that the practitioners and supporters of quackery and of irregular methods of medical treatment were among the influential voters whose active opposition might jeopardize their re-election. It was also found to be impossible, in a few of the States, to establish regulations for the practice of medicine which would be shaped to the wishes, principles or prejudices of those members of the Legislatures who believed that they themselves were occasionally benefitted by prescriptions that were not wholly scientific in their character, or by remedies that had acquired their reputation by extensive advertising of their supposed merits and efficacy. The legislation of the last year or two, however, seems tending to greater stringency, and to more ad-

equate provision for the regulation of medical practice. Several States which had hitherto but feeble legal enactments, or possibly none at all, have, since our last report, adopted measures that will probably be found to be effective in their working and conducive to the public welfare. The excellent laws now in force, in West Virginia and Illinois have been taken as models, and although it has been found impossible to imitate them exactly, on account of local obstacles and local prejudices, the wedge has been entered, and some good results must inevitably attend the enforcement of the law. A letter recently received from Dr. Millard, the Secretary of the State Board of Minnesota, a State which has adopted restrictive enactments since the last annual report of your Committee, summarizes the general aspects of the best of these laws; and we may quote his remark upon their provisions as particularly appropriate in this connection; especially as he has given the subject of medical legislation close study and attention:

"I think," says Dr. Millard, "The law or 'Acts' now in force in West Virginia, Illinois, Minnesota and Missouri, the best, by far, extant in any of the States. These four States are governed by virtually the same law, and have a constituency of at least 15,000 physicians. Each act gives the Board the power of deciding the diplomas of what schools they shall recognize, and of revoking the certificate of any practitioner for unprofessional conduct; also the power to grant licenses to non-graduates by passing the necessary examination to test their fitness. You will observe that the main features of the law of these four States make the Board the censors of the different medical schools, as well as of the professional conduct of those practicing within the jurisdiction of the different Boards. It is claimed by the enemies of this act that it constitutes a 'medical autocracy' of the Board, and that it may use its power very unjustly. There is no doubt that, if the act is administered by unfair men, this criticism is true. It is, however, noticeable that outside of a few '*commercial*' medical schools, the law gives the greatest satisfaction, and I have not heard a whisper of complaint. The profession in general and a few of our leading medical institutions recognize that this country is flooded with incompetent medical men. That the time has arrived to cry, halt! all will assert, but as to the means of bringing about the halt there is a great difference of opinion. That it will not be brought about by the colleges themselves the profession is satisfied, after the last ten years' agitation of the subject, and the example set by Bellevue and some others. In appealing to legislatures to regulate this evil, I think the correct law should compel *all parties* to submit to an examination before practicing in the State. Such legislation is, however, impracticable now, and next to this I think the acts of the States I have mentioned the best."

Whatever the character of a legislative enactment may be, the benefits to flow from it will necessarily depend upon the manner in which it may be enforced. All the States may not be so fortunate as those of West Virginia and Illinois, in the possession of executive officers, in the possession of their secretaries (Drs. James E. Reeves and John H. Rauch), who are at once vigorous, keen, energetic and alive to the public interests involved in a faithful execution of their respective trusts. As stated in our previous report, West Virginia is, we believe, the only State which has a Board whose medical members are all of one professional faith. The medical profession in every State, however, recognizes the fact that these laws are designed, not for their own protection, but for the good to the community at large which flows from properly regulated medical practice. Indeed, as has recently been remarked in the editorial columns of a prominent medical serial,[1] "registration laws primarily intended for the protection of the profession, seem particularly liable to fall short of their intended objects, not so much because of defective construction, as of unfaithful interpretation; indeed, unless definite and comprehensive in expression, and fully sustained by public opinion, they may be made in practice to sanction and perpetuate the very evils they were intended to correct. It has been more than once asserted, by those fully qualified to judge, that in the neighboring State of New York the medical profession has really lost, by the Registration Act, more than it has gained. At the last meeting of the State Society of New York, it was mentioned as a fact, by one of the members, that an Indian medicine-man had driven into Rochester, in war-paint and feathers, though engaged in the peaceful art of selling patent medicine, and, having gone to the Prothonotary's office and paid the registration fee, he had obtained a certificate as a physician, with full authority to practice under the law. Much disappointment has been expressed by physicians in Pennsylvania, as well as in New York, at the operation of the Registration act, it being claimed that the practical result is that, instead of elevating the profession above irregulars and charlatans, it has degraded the regular practitioner to the level of any one who can register under the act, however unworthy he may be to be in the ranks of the medical profession. It seems more than absurd that a physician may commit a crime that will render him in the eyes of the law unworthy to exercise the franchise of a freeman at the polls, and yet no bar exist to his continuing in practice, and no means are provided to annul or deprive him of the diploma he has dishonored."

The Mississippi State law, which was adopted in 1882, is stated, by an earnest observer in that section of the country,[2] to be on a par with that of Illinois, in its efficiency and practical working, and is said to have accomplished already all that its most sanguine friends could have expected. To quote his own language, "all practitioners in the State, as far as I am aware, of every grade, have cheerfully complied with all its requirements. * * The pile doctors, down to the Indian doctor tramping around with his banjo and his calico gown, have given us a clear field. Their places are vacant, and their voice is heard no more in the land. Thus, already, in one season,

[1] *Philadelphia Medical Times*, July 14, 1883.

[2] Dr. J. M. Taylor, *Miss. Valley Med. Monthly*, Feb., 1883.

thousands of dollars have been saved to the people of the State, to say nothing of other benefits."

As we must necessarily refer frequently to the conspicuous labors of the Illinois State Board, in any report intended to illustrate the operation of State laws for the relief of the public from the operations of unlicensed or legally unrecognized practitioners of medicine, in its various departments, we must briefly allude, at this moment, to its numerous refusals to extend its privileges to unworthy applicants for its recognition, and at the same time, signify our appreciation of its efforts in a direction well worthy of our recognition as Fellows of the American Academy of Medicine, the attempt to secure a common Examining Board on preliminary education for all the medical schools of Chicago. To still further perfect its work, an effort was recently made in that State to secure the passage of a law which would rid the community of advertising and lecturing quacks.

A direct service to the medical profession throughout the country is being at this very moment executed by this Board, and especially by its very efficient and energetic Secretary, Dr. John H. Rauch, in the publication of an elaborate pamphlet on "Medical Education and the Regulation of the Practice of Medicine in the United States and Canada," in which are embodied at length the details of all the laws now in force in the various States and Territories of the Union, and in the Provinces of the Dominion of Canada. Each is herein represented in its present attitude, up to the very latest possible date of practicable information, and in numerous instances the opinions of official authorities as to the efficiency of the law are appended. Not only is the present phase of medical legislation thus made apparent at a glance, but medical education is portrayed, in the brief analysis of the course of instruction, requirements, etc., of each medical school recognized by the Illinois State Board, including, of course, all the other colleges of the country which have a reputable standing through their chartered existence in each State. At the meeting of the Council of the American Academy of Medicine in Philadelphia, in October last, the importance of such a work was so seriously recognized, as an outcome of the slight efforts in this direction made by your committee in their annual reports, that the Secretary of the Academy was instructed to approach some of the leading publishing houses with the view of giving to the profession, as one of the labors of the Academy, a work that would embody all the laws regulating medical practice as they existed at that time. Fortunately, an enterprising public body, the State Board of Health of Illinois, and its enthusiastic and valued Secretary, have now done what the publishers could not regard as a safe commercial venture, and the profession and public will doubtless be more liberally benefited by that more general mode of distribution. The good work thus executed by the Illinois Board will be the accepted authority for the profession on all points relative to medical education and practice in the United States.

It is not contemplated by your committee to enter into the details of the new laws enacted since the presentation of their last annual report. It may be briefly stated that the following States and Territories are now in the possession of laws, of various degrees of force and effectiveness, regulating the practice of medicine: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Vermont, Virginia and Wyoming. Canada has laws in operation in the provinces of Manitoba, New Brunswick, Nova Scotia, Ontario and Quebec. The States and Territories in which legislation has been established since the last annual report of this committee are Delaware, passed April 19, 1883; Michigan, which went into effect September 7, 1883; Minnesota, approved March 6, 1883; and Missouri, in effect from July, 1883. All of these recent enactments have elements to be commended, and if strictly enforced will undoubtedly command success in their execution.. Of the States above mentioned in the general list, a few have weak and temporizing provisions. Pennsylvania still lags behind her sister States; her legislature is content, for the present, with having adopted a simple registration law, which may have, and doubtless has, already accomplished a certain amount of good, and this has been accepted as the only present attainable and possible substitute for the stringent and restrictive measures which the profession and public so urgently desire.

Of the peculiarities of construction or operation of some of the laws now in force much might be written in commendation or criticism; but the limits of this report render their recapitulation wholly impracticable. Sufficient is it to point out a few of these, in elucidation. In Alabama, for example, the diplomas of medical colleges confer no right to practice medicine in that State; the applicant must be actually examined by a board appointed for that purpose. In Arizona and Pennsylvania and in Washington Territory, the law is simply for purposes of registration; in Arkansas a bill providing that all practitioners should be graduates of reputable medical colleges failed, this year, to pass both houses of the Legislature, and county boards of medical examiners, appointed by county judges, who may not be competent to decide as to the professional qualifications of their appointees, still continue to give certificates to applicants for permission to practice medicine in that State. Connecticut's very brief law is mainly intended for the punishment of itinerants. In Kentucky the law is a dead letler except in a few counties, and in Texas and Nebraska it is weak and ineffective.

Our Associate Fellow, Dr. Piffard, considers the New York law a good one, but that it has one important defect, in that a perjury in registering is only punishable as a misdemeanor, and not as a felony. Oregon has had a bill before the Legislature every year for ten years past, but it has not yet succeeded in attaining so desirable a consummation. In Tennessee, which has no law of this kind, the practice of medicine is said to be free to all; accord-

ing to the authority of the Secretary of the State Board of Health, "Indians, Negroes, confidence men, and all that ilk, ply their trade, with no restrictions whatever. Any man who claims to be a doctor *is* one, hence druggists who do not know enough to make a living turn out as doctors in full practice before you know it. A farmer boy, too lazy to plow, reads an old work on practice, or 'Every Man His Own Doctor,' invests six dollars in drugs, and is a physician; and being a 'regular,' we all consult with him. Our legislators will not touch, and our doctors are too timid to press, the subject, and so we languish in the old paths."

It may well be asked by us, as a committee watchful of the progress of the times, whether, in States like this, which have imposed no restrictions upon the unlimited and unbridled practice of medicine, the experience of nearly four centuries has seen any marked change from the days of King Henry VIII. to the present hour[1]; for we read in the preamble of an Act, passed in England in the year 1511, looking to the regulation of the practice of physic and surgery, that its enactment was rendered necessary by the fact that "the science and cunning of physick and surgery is daily, within this realm, exercised by a great multitude of ignorant persons, of whom the great part have no manner of insight in the same; some also can read no letters in the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomably take upon them great cures and things of great difficulty, in which they * * apply such medicine as be very noxious and nothing meet therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the king's liege people."

Utah has shown her interest in medical legislation only by that provision of her penal code which punishes physicians who are drunk, and has been content with this measure of legislative protection of the people of that section of the country. A correspondent in Salt Lake City[2] writes that "the inference is, that during the little time he is sober he will not do much harm. As for the medical fraternity proper, I do not think any of them care for any law regulating medicine. I believe they are advocates of the doctrine of the 'survival of the fittest.'" Wisconsin might be placed in the list of those having a law to regulate the practice of medicine, but the title indicates that it is simply "An Act to prevent Quacks from Deceiving the People by assuming a Professional Title," and not really a law that may be classed in the same category as those mentioned previously.

In a letter recently received from Dr. Rauch, Secretary of the Illinois State Board of Health, the following interesting remarks are made by him:

"The following States may be said to have *good* laws, viz: North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, Louisiana.

"Alabama requires *all* persons, both those holding diplomas and those having none, to appear before the State or county boards.

"North Carolina requires about the same, but the penalty for violation of the law is inadequate, and there is some complaint against it for that reason.

"The Mississippi law is new, and can not be well judged yet.

"After this year, graduates of all colleges not complying with the requirements of this Board will be examined by the Board before being admitted to practice."

Such are the main points of interest connected with the progress of legislation in this country, which your committee have deemed it advisable to report. The facts they stated, in as comprehensive and condensed a manner as they have thought possible in their efforts to illustrate the progress of legal restrictions upon the practice of medicine, warrant them in expressing the view that commendable progress is being effected in this direction, and to entertain the belief that bright anticipation may be indulged for the future establishment of a healthy public sentiment that will in time protect the people themselves from the evils of irregular practice which they have blindly tolerated for so long a series years.

[1] W. T. Bly. "Early English Medical and Surgical Legislation." *New York Medical Record*, September 1st, 1883.

[2] Dr. H. J. Richards. Report of Illinois State Board.

MEDICAL PROGRESS.

ON A PECULIAR DISEASE OF HOT CLIMATES.—(*Psilosis Linguæ—Psilosis Mucosæ Intestini*). Under this heading Dr. George Thin (*Practitioner*, September) describes a disease, to which the local name of "Sprew" is given, which name is likely to mislead. Webster defines sprew as equivalent to thrush. Dr. Thin proposes the term psilosis as expressive of a constant feature of the complaint, the bareness or rawness of the mucous membrane. The disease prevails among the foreign residents in many of the Chinese ports, and the patient carries it home with him; or, being quite well during the course of the summer months, experience a recurrence of the disease when the weather becomes suddenly damp and cold.

Its onset is marked by a morning diarrhœa of stools that consist of a watery, thin, straw-colored fluid, which causes slight debility, that passes off as the day wears on. This may continue for months, or one or two years, without producing marked change. If the patient is delicate, after a few months a marked decrease of strength is observed, and he may become very ill. If he is naturally strong, it may last even so long as a year without any marked diminution of strength, but invariably sooner or later, if the disease continues, a condition of great debility ensues. In what may be termed the second stage of the disease dyspeptic symptoms appear, soreness of the mouth, pain in the stomach after food, painful, flatulent distention, and sometimes soreness in the rectum. At the same time there is more or less nausea, loss of appetite, and prostration. In the third, what may be called the fatal stage, which may last for a considerable time, the symptoms of marasmus are marked.

During the whole course of the disease the tongue

is more or less affected, showing an unusual sensitiveness to hot fluids or acid substances, soreness over the whole mucous membrane of the mouth, localized pain in one or two points of the tongue. During exacerbations the tongue is seen to be redder than usual, and raw looking. More advanced, it may be smooth and polished, or rough and cracked, at times covered with aphthous deposits.

Of the pathology, little is known. It evidently consists in a defect of the formative power of the epithelium of the mucous membrane of the tongue and intestine—sometimes of one, sometimes of the other, for in some cases the prominent symptoms are intestinal, and sometimes of both. It occurs only in persons who have been in malarial countries, but it is not certain that it is due to malaria. In the treatment, diet is all important, an avoidance of vegetables, and hard, indigestible food of all kinds. Milk diet has succeeded best with Dr. Thin. Astringents and opiates are useless—produce a secretion of bile through the use of rhubarb and epsom salts, and give small quantities of quinine and bitters. The local treatment of the tongue was not satisfactory. Caustic solutions were of no avail. Boracic acid and glycerine seemed to relieve somewhat. Dr. Thin forbade the use of tobacco and alcoholic liquors; but in two patients who recovered, the use of a little alcohol in a very diluted form seemed to be beneficial.

On the Substitution of the Hypogastric Section for the Different Methods of Perineal Section as the General Method in Cystotomy. —Prof. Villeneuve, M.D., discusses this question at length in an article in the *Revue de Chirurgie*, Sept. 10, and comes to the following conclusions:

1st. The hypogastric section, which, up to the present time, has only been employed as an exceptional method, seems destined to become the general, but not exclusive, method of cystotomy.

2nd. It should be practiced with the aid of the most recent perfected improvements applied to operative manipulation; as ballooning of the rectum (this is an awkward word, and as we have adopted such terms as ballottement, why not say ballonnement to express the dilatation of cavities through the distension of rubber balloons—or what is similar to them, in other words, the use of the colpeurynter); vesical injections; draining of the peritoneal cul-de-sac by syphon-tubes; and antiseptic precautions and dressings.

3rd. The suture of the bladder must at present be discarded. But it remains as an ideal to be followed up, and if it can be accomplished, it would at once, by immediate union, place the superiority of the hypogastric section as beyond all question.

4th. The hypogastric section remains, as formerly, a necessary method in cases of very large stones, of intolerant bladder, and of impermeable or constricted urethra or vagina.

5th. It is presumable that it will become the method by preference in old persons, and in adult men in certain cases where lithotrity is not practicable, and which have up to the present time been treated by the different perineal methods.

6th. In male children, it will probably be found at least to be equal in success to the perineal section. But the latter has been so successful for such a length of time as to make this of comparatively little importance.

7th. In little girls, and the young girl at puberty, the hypogastric section should be the one selected.

8th. In women who are no longer virgins, the question of a choice between the hypogastric section and the vaginal section remains a mooted question, and requires further investigation.

9th. An inflammatory affection of the uterus, a notable deformation of the bladder through uterine trouble, and especially cystocele, should influence the selection of the hypogastric section.

10th. The hypogastric section in adult females should be preceded by dilatation of the urethra.

11th. Constitutional affections and diatheses do not constitute any special indications for a choice in the operation; and the same may be said as regards the wounding of this or that branch of the sympathetic plexus.

The Jubilee of Dr. Friedrich Herrmann. — The *St. Petersberger Medicinische Wochenschrift*, in its issue of Sept. 10 (22), devotes its first page and a part of its contents to congratulations to, and a sketch of, Dr. Friedrich Herrmann, who, it says, "yesterday 50 years ago entered the service of the Obuchow Hospital as a supernumerary; yesterday his congratulators assembled for his jubilee, that he had for so long led an honorable career, and that, after so long a service, he was still able to perform his duties with undiminished power. Fifty years of faithful service and severe, self-sacrificing work in the same place—in these few words lie much. A man who can be so spoken of must be a man indeed, and his name can only be spoken with honor and respect. We hasten to attend the jubilee of the highly honored and highly deserving veteran, carrying with us also our sincere and respectful wishes for his happiness, and would wish that there were yet many among us who were capable of persevering at their posts of difficulty and of doing as Herrmann persevered and what Hermann has done."

In the sketch of Dr. Herrmann which follows, it appears that he was born at St. Petersburg, March 22, 1811, of German parentage, and after becoming an apothecary, he graduated as a physician in the Medico-Chirurgical Academy, June 24, 1833. On Sept. 9, 1833, he entered the Obuchow Hospital as a supernumerary, becoming Physician-in-chief in 1862. Besides his position in the hospital, he has received recognition from his Government in the shape of various orders, crosses and titles. He published his studies of epidemic cerebro-spinal meningitis in this journal (*St. Pet. Med. Wochenschr.*, Vol X.), and has written upon remittent fever, the abuse of spirituous liquors, and the diagnosis of anthrax intestinalis.

Trichina in Germany.—We find in the *Gazette Hebdomadaire des Sciences Médicales de Montpellier*, Sept. 15, an article taken from the *Archives Veter.* on this subject, which shows the frequency of the

prevalence of trichina in the north of Germany, and it questions the right of Germany to accuse America of furnishing so much trichina pork, as the trichina pork of America has at least one advantage, that of rarely communicating the parasitic infection, as, by the process followed in preparing the pork in Chicago and Cincinnati, the trichinæ are killed, which is not the case in the pork considered eatable in the north of Germany, which, according to the custom of the country, is but imperfectly cooked. It would seem, from the recent discussions at the German Bundersrath, that the commissary of the imperial government could cite but three cases of trichinous infection resulting in Germany from the consumption of American pork; that of Rostock, 1871; Bréme, 1872; and that of Dusseldorf, 1881; while he could cite by thousands the cases of infection caused during that period by indigenous trichinous pork, and nearly by hundreds the cases of death which that infection had caused.

The following from the official reports published by Dr. Eulenberg gives the number of cases of trichinosis observed during six years in Prussia:

Year.	Carcasses Examined	Cases of Trichina.
1876	1,728,505	800
1877	2,857,272	701
1878	2,524.105	1,222
1879	3,213,155	1,975
1880	3,342,303	2,284
1881	3,118,780	1,695

Making 8,677 cases of trichina out of a total 16,782,-210, or one case in 1,934.

To recognize these cases of trichina it required an army of inspectors with the microscope, which numbering 12,000 in 1876 increased to 18,581 in 1881. In spite of of these precautions the number of published cases of trichinosis in the human subject has been quite considerable. There were in 1876 358 cases; 1877, 356; 1878, 488; 1879, 400 and over; 1880, 200; 1881, 238. That is to say 2,040 in six years, being 340 a year, out of which there were 84 cases of death, or 14 a year.

There follows in this article an account of the proportion of the American pork affected with trichina as shown on inspection in various localities in Germany, but as it is not presented in a very ready form for tabulation we omit it.

GENERAL GLANDULAR HYPERTROPHY.—Prof. Dr. Castiaux (*Bulletin Médical du Nord*, July) reports a case of this kind occurring in a woman 58 years of age, of vigorous constitution and with no previous history which would throw any light on the cause of the disease. She entered the hospital suffering from glandular enlargements on the left side of the neck, which had for the past four months gradually become more pronounced and troublesome. On examination, the superficial and deep lymphatic glands on the left side of the neck were found to be enlarged and hardened, passing under the clavicle and into the corresponding axillary space. They varied in size from a walnut to a hen's-egg, pushing the larynx to the right and compressing the blood-vessels. On the right side of the neck above the clavicle were a few affected glands—none in the right axilla; nor were any of the inguinal glands affected. The patient had an enormous embonpoint. This condition produced marked dyspnœa, alteration of voice and numbness of the left arm. Treatment generally by potassium iodide, locally by injections of iodine tincture, had no effect. The tumors increasing markedly in size and the symptoms becoming more exaggerated, an operation for the enucleation of these glands was performed without difficulty, but laying bare the internal jugular vein; it was followed by a marked amelioration of the symptoms. In nine days after the operation hæmorrhages set in, which became so serious and persistent that an attempt was made to ligate laterally the internal jugular vein. The attempt succeeded, but with great loss of blood, and was soon followed by death. The *post-mortem* showed an ulceration into the vein two and a half centimeters long. All the glands on the left side of the neck were enlarged, from the base of the cranium down; the whole of the arch of the aorta was compressed by glands. The left pneumogastric was compressed throughout its length, the right was free in the thorax, both was surrounded by a large glandular mass. The superior portion of the right bronchus was perforated by a gland which had destroyed its wall and projected into its cavity. The pericardium was double and adhered closely to the morbid mass of glands. One gland, of the size of a hen's-egg, had pressed through the outer envelope, projecting into its cavity, but covered by the serous layer. The left trachial plexus and axillary vessels were surrounded by glands; the right were free. The posterior surface of the sternum showed large glands firmly attached. In the pleural cavities, particularly the left, along the intercostal spaces were little tumors adhered to the pleura. The lungs, *on their surfaces*, showed white-projecting nodosities adherent to the pleura. The vertebral glands were all affected, forming a chain which bifurcated and followed the iliac vessels to the crural rings where they were checked. The inferior vena cava was compressed. The mesenteric glands were also hypertrophied. The liver was very large, with little gray spaces on its surface, quite circular in form and in places easily enucleated by the handle of the scalpel, in others blending with the healthy liver tissue into which it sent small prolongations. The spleen was twice the normal size with firm tissue, containing little gray soft tumors of the size of a small pea. The bodies of the vertebræ throughout were of a spongy texture, infiltrated with a gray substance. The cervical glands were hard, the abdominal glands were soft. It is not necessary here to give the histological appearances, although they were very interesting. It was evident to the reporter that it was a case of lymphadenoma and that commencing at the neck it invaded successively the thorax and abdomen. That the same tissue as found in the glands, reproduced itself in the spleen, the liver, the pleura, and even in bone. One further point, which is not mentioned above, is of interest: that in the operation for ligating the internal jugular vein, it remained open for nearly half an hour without the entrance of air; nothing opposed that entrance, but neither the veins nor right side of the heart contained the slightest trace of its presence.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, NOVEMBER 3, 1883.

SPECIALTIES, AND THEIR ETHICAL RELATIONS.—Twice, within a short time, has the editor of this journal been applied to for information (and many other times in years past) in regard to the questions, "*How far, and in what way*, can those members of the profession who are desirous of pursuing a special practice, or, in other words, limiting their practice to certain diseases or the affections of certain organs, make known their position by cards or advertisements without violating the National Code of Ethics?" The highly intelligent sources from which these inquiries have come, render it probable that only a small number in the profession know the answers that have been given at different times by direct action of the American Medical Association. It is well known that the National Code of Ethics contains no allusion to *specialties*, in the sense that the word is now used, but simply declares it to be "derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; etc., etc." It declares: "These are the ordinary practices of empirics, and are highly reprehensible in a regular physician."

Admitting that these provisions plainly prohibited all classes of regular and honorable practitioners from advertising either in the public prints or by private cards in such a way as to call the attention of those laboring under particular diseases; the rapid development of specialties soon led those following them to assume special titles not conferred by any educational institution, and not only put the same on their cards, but, in addition, to use such expressions as "special attention" given to this or that disease or class of diseases.

It was claimed by many of the specialists that the daily use of cards containing such titles as Ophthalmologist—Otologist—Gynæcologist, and such expressions as "Special attention given to Diseases of the Eye and Ear," or to "Diseases of Women," etc., and the publication of such cards in strictly professional journals, or the sending of them in envelopes to members of the profession, was not "inviting the attention of individuals affected with particular diseases," and consequently not a violation of the Code. And individuals of this class managed to discuss the subject and urge these views, during some part of almost every annual meeting of the American Medical Association prior to 1868. At the meeting of that year, Dr. E. L. Howard, of Baltimore, offered the following resolution:

"*Resolved*, That a committee of three be appointed, to report at the next annual meeting on the subject of specialties in medicine, and on the propriety of specialists advertising."

"After much debate, the previous question was called by Dr. Bibbins, of New York, and sustained, and the resolution was adopted by a large majority. The President appointed as the committee, Drs. E. Lloyd Howard, Frank Donaldson, and Christopher Johnson, of Maryland." (See Transactions of Am. Med. Association, Vol. 19, p. 35.) At the next annual meeting, held in May, 1869, this committee made a report, which closed with the three first resolutions given below. The fourth resolution was moved as an addition by Dr. L. P. Yandell, Jr., of Louisville.

"*Resolved*, That this Association recognizes specialties as proper and legitimate fields of practice.

"*Resolved*, That specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

"*Resolved*, That it shall not he proper for specialists publicly to advertise themselves such, or to assume any title not specially granted by a regularly chartered college.

"*Resolved*, That private handbills addressed to members of the medical profession, or by cards in medical journals, calling the attention of professional brethen to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association." (*Vide* Transactions, vol. xx, p. 28.)

These four resolutions were deliberately adopted by a vote of the Association and have remained unchanged since.

They constitute no part of the constitution, by-laws, or code of ethics of the Association; but are to be regarded as indicating the views of that organization concerning the questions involved.

Some of the restless ones were not satisfied, however, and at the annual meeting of the Association in 1873, a resolution was adopted requesting the members of the Judicial Council as a committee to inquire into the expediency of a general revision of the Code of Ethics, and report at the next annual meeting. In obedience to this request the Committee, consisting of members of the Judicial Council, gave the subject full consideration and reported at the meeting in 1874, and the report was unanimously adopted by vote of the Association. That part of the report relating to the subject now under consideration is in the following words:[1]

"The Code of Ethics very properly makes no mention of specialties or specialists, but presents plainly the rules necessary for the maintenance of professional character as applicable to all. But we are asked how, then, can those who wish to pursue a special practice make known their position to their brethren and the public? We answer that the title of Doctor of Medicine covers the whole field of practice, and whoever is entitled to that appellation has the right to occupy the *whole* or any part of the field, as he pleases. The acceptance of this honorable title is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated, not by special or qualifying titles, such as *oculist*, *gynæcologist*, etc., nor by any positive setting forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying, 'Practice limited to the diseases of the eye and ear,' or 'to diseases peculiar to women,' or 'to midwifery exclusively,' as the case may be. Such a simple notice of limitation, if truthfully made, would involve no other principle than the notice of the general practitioner that he limits his attention to professional business within certain hours of the day. Neither could it be regarded as a claim to special or superior qualifications. To give the specialist any privileges beyond this, would be to invest him with a special advantage inconsistent with the equality of rights and duties pertaining to the profession."

We are not aware that the Association has taken any action in relation to the Ethical Status of Specialties since the adoption of the report of which the above quotation is a part. Taken in connection with the resolutions previously quoted, each member of the profession can see plainly just how far, and in what way, he can make known, both to the public and to his professional brethren, the fact that he desires to *limit* his practice to any particular part of the general domain of medicine and surgery.

[1] See Transactions of Am. Med. Association, Vol. 25, pp. 30-31.

EXPLANATION: The last three numbers of the JOURNAL have been printed on the day of their date. But owing to the amount and quality of ink necessarily used in giving the numerous illustrations in the interesting paper of Dr. Keyt a fair impression, it was found necessary to delay folding the sheets a few days, and consequently made that number (the 15th) late in reaching its readers.

DOMESTIC CORRESPONDENCE.

PHILADELPHIA LETTER.

OPENING OF THE MEDICAL COLLEGES—OUR DISTINGUISHED VISITORS—THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

PHILADELPHIA, Pa., October 23, 1883.

On October 1st, about noon, Prof. Alfred Stille delivered the general introductory lecture to the one hundred and eighteenth course of lectures in the Medical Department of the University of Pennsylvania. The speaker was warmly welcomed by a large gathering of eminent members of the profession, many alumni and students, who were amply rewarded by a most excellent address, in which Dr. Stille dwelt to some extent upon higher medical education. In the evening of the same day probably the largest audience that has ever assembled in the arena of Jefferson Medical College Hospital greeted Prof. Theophilus Parvin, who delivered the inaugural address at the opening of the fifty-ninth annual course of lectures of the college. Prof. Parvin spoke in an able and scholarly manner on the "Genius of Medicine." At the conclusion of the address the class, through their chairman, John V. Sheppey, presented Dr. Parvin with a beautiful floral emblem, in which was set a pair of Wallace's forceps. Prof. Parvin, in accepting the gift, which was symbolical of the good feelings of the class towards their new teacher, responded in his usual happy and appropriate vein.

The Medico-Chirurgical College began also on the first of October their third course of lectures, with an introductory by Dr. Frank O. Nagle. The Philadelphia Polyclinic and College for Graduates in Medicine began on the same day their fall sessions. The same corps of teachers, with the exception of Dr. R. J. Levis, who has resigned, will continue to give instruction to physicians from October until July.

Sir William MacCormack, during his short stay in Philadelphia, was received and honored by our most prominent surgeons. The attentions that this distinguished surgeon received, although of a private nature, were as cordial as that which was tendered to England's Chief Justice, Lord Coleridge. This eminent jurist was especially honored by the trustees of

the University of Pennsylvania, with a dinner in the University hall, at which were present not only our leading scientists and professional men, but likewise our most prominent citizens. The presiding officer, Prof. William Pepper, in presenting the distinguished guest, did so in such a masterly manner as to reflect the greatest credit upon the University and his profession.

At a conversational meeting of the Philadelphia County medical Society, held on Wednesday, October 17, Dr. Charles Herman Thomas reported "Three Cases of Downward Displacement of the Transverse Colon, including account of Autopsies." The cases showing the forms of displacement were illustrated by diagrams. Dr. Thomas stated that during the illness of the patients the conditions referred to were not in any instance recognized. After recounting the history of each case, the speaker added in conclusion that downward displacement of the transverse colon had been the immediate cause of death in them all, and that while the condition was rare, but few if any cases were recorded of this condition. Dr. Albert Smith, who was in consultation with Dr. Thomas in one of the cases, referred to the fact that they were unable to make out accurately a diagnosis, and thought that could such cases be recognized, the elevation of the hips might cause the colon by gravity to return to its proper place. Prof. Robert Bartholow said that downward displacement of the transverse colon should be divided into congenital and acquired. He had seen cases of both forms during his service in the Medical Department of the U. S. Army, and that the condition was not uncommon, especially the congenital displacement. Dr. O. H. Allis reported an interesting case of downward displacement occurring in his practice.

Dr. John V. Shoemaker followed with a paper on "Napthol; Its Use and Value in Medicine." (See page 501.) Dr. A. Van Harlingen also referred to his experience with naphthol and its great value in scabies and other skin affections to which Dr. Shoemaker referred. Treatment of psoriasis was the subject of the next paper, which was read by Dr. Van Harlingen. The various remedies used internally were taken up in detail, and those preferred as the most effective after using diuretics, were to one class Fowler's solution, and to the other iron in some form. The speaker next discussed the various methods of removing the scales, after which naphthol, crysorrhin and pyrogallic acid were each considered as means of treating the disease locally. He dwelt on the poisonous effect that might arise from the use of naphthol, and showed medical gelatine rolls which, while suitable for local use, were hardly applicable for want of the proper apparatus in private practice. In closing, Dr. Van Harlingen commended pyrogallic acid as one of the very best remedies for local application to psoriasis. It was free from the irritating and many unpleasant effects of crysorrhin.

Dr. Shoemaker added, I think, that Dr. Van Harlingen has included in his interesting and instructive paper about all the remedies which are used in this disease. Believing that psoriasis is due to an accumulation in the blood of an excess of certain excrementitious substances, a condition known as one of suboxidation, I always begin and continue the treatment with the object of overcoming this peculiar state of the system. I accomplish this purpose by using such remedies as will act effectively upon the liver and kidneys. I rely more upon removing the excrementitious substances from the blood by these organs, as well as by making the skin very active by various baths, than by giving arsenic and other preparations for their systemic effect. I do not believe in arsenic, or any other remedy, as a specific for psoriasis, and believe they only act at times by assisting to overcome this peculiar state of the blood. Napier, of Glasgow, extolled about a year ago crysorrhin, known formerly as crysophanic acid, given internally in one-half grain doses, as a remedy for psoriasis. Its action is that of a purgative pushed to toleration, and it will affect the blood and pale the skin of psoriasis patients, just as any other purgative would given under similar circumstances. In using arsenic, which I often do as an assistance to the treatment just referred to, I always prefer arsenic in the form of arsenious acid or sodium arsenite. The great objections to arsenic solutions, especially Fowler's, are their unstable state, and the improper manner in which they are often prepared. I therefore seldom use them, unless they are fresh and well prepared at the time of administration. If such solutions are kept any length of time they will undergo a change. I have not only made these observations, but have seen the same referred to in several medical journals by well-known authorities. I hold in my hand an extract taken from the *Journal de Pharmacie et Chemie*, in which M. Delahaye refers to the fungoid formation in Fowler's solution. Here is another extract, taken from Lewin's Accidental Effects of Drugs, in which the author states that "it has been proved that Fowler's solution loses arsenious acid in the course of time, probably under the influence of organic substances which have gained access to it. The acid is reduced, and escapes as arseniuretted hydrogen gas. Great loss may be occasioned in this way." As to the manner of administering arsenic for the treatment of psoriasis, I always prefer, when I can, to give it by the hypodermic method. I generally use pellets of sodium arsenite, such as I exhibit, divided in one-sixteenth, one-tenth, one-fourth and one-half grain doses, as manufactured by Dr. L. Wollf, of this city.

Prof. Bartholow in his recent work on Hypodermatic Medication speaks especially of the utility of this salt of arsenic subcutaneously, on account of it being a higher oxide than the potassium arsenite and therefore less an irritant. I usually select the inferior scapular or sacral region for the injection and repeat the operation every day until the eruption shows some signs of abating. In the meantime the constitutional and local treatment already referred to is continued. This method is precise, saves the alimentary canal and acts in a safer and quicker manner than all other means of administering arsenic for a systemic effect. I perfectly agree with all Dr. Van Harlingen has said of the local treatment of psoriasis except in the use of pyrogallic acid and naphthol. I

regard pyrogallic acid as a dangerous remedy, having seen in several instances very unpleasant systemic effects follow its use. Beisner reported in 1880 four cases of poisoning from the external application of pyrogallic acid in which two of them terminated fatally. As to naphthol, no prevention whatever need be used in applying such as I have exhibited to you. I have used it all over the body without any untoward effect, both incorporated in lard and gelatine. You have seen me spread on this naphthol-gelatine dressing on the typical case of psoriasis I had before you this evening. The dressing is easily prepared, with an ordinary tin or china cup suspended in boiling water. The operator can add ten or thirty grains of naphthol to one-half ounce of gelatine with a little glycerine, stir in the cup now suspended in boiling water and as the heat liquifies, the mass can be easily spread over the patches. Plenty of hot water will in a few days remove this dressing that can be hastily and well applied in any physician's office or at any patient's home.

Dr. Van Harlingen in response stated that he had referred to the use of diuretics in his paper and that the objection to the use of Fowler's solution could be overcome by having the preparation always freshly made. In reference to applying pyrogallic acid, he would of course only use the remedy in case the eruption was limited in extent. Naphthol had been regarded, in the form generally used, as at times giving rise to dangerous symptoms. We are, however, glad to see different results reported after the drug was freed from contaminations.

The last paper of the evening was by Dr. James C. Wilson on Hydrargyrum Formidatum. He spoke of the extent to which this preparation was now used abroad in the treatment of syphilis, by the subcutaneous method. Liebreich, who had brought forward this new drug, claimed that after hypodermic injection it would undergo disintegration, the mercury be set free and so exert its action on the lesions of syphilis. Dr. Wilson further referred to the preparation being easily soluble in water, having a neutral reaction, not coagulating albumen, and when injected beneath the skin was attended with little pain, no inflammation, or salivation.

Dr. Shoemaker said: "This paper is of much interest to me, as I have been using for some years, with good result, the hypodermic method of treating syphilis with corrosive sublimate. I have, however, found that the corrosive sublimate in from 1-10 to ½ grain doses, increased or diminished in amount according to the requirement in each case, was sufficiently effective in managing the majority of stubborn cases of syphilis. If the hydermic syringe is in good order, as well as the needle, a gold one being preferable, and the operation is performed in a careful and skillful manner, no abscesses or ill effects can or will follow the injections. I have treated many cases after this manner with the most happy effect and cannot see that the remedy presented possesses any advantages over corrosive sublimate. J. V. S.

WASHINGTON, D. C., October 25, 1883.

At the first annual meeting of the Washington Obstetrical and Gynæcological Society, held October 19th, 1883, the following officers were elected for the ensuing year: President, Dr. S. C. Busey; Vice Presidents, Drs. W. W. Johnston and J. Tabor Johnson; Recording Secretary, Dr. C. H. A. Kleinschmidt; Corresponding Secretary, Dr. Samuel S. Adams; Treasurer, Dr. G. L. Magruder; Committee on Business, Drs. D. W. Prentiss, C. E. Hagner, S. S. Adams; Committee on Admissions, Drs. H. D. Fry, T. E. McArdle, J. T. Johnson; Committee on Publications, Drs. T. C. Smith, C. H. A. Kleinschmidt, T. E. McArdle; Committee on Pathological Specimens, Drs. Johnston, Acker, and G. B. Harrison.

LETTER FROM A. B. TADLOCK, PRESIDENT TENNESSEE STATE MEDICAL SOCIETY.

KNOXVILLE, TENN., Oct. 15, 1883.

Mr. Editor: — THE JOURNAL of the 6th inst. just received, late, it is true, in reaching its destination. But it is better late than never, not having lost any of its sweetness on the desert air, nor in the tardy U. S. mail bags. It is an interesting number in many respects, scientific and professional. The subject of medical contracts, opened up by Russy, and your able answer, certainly needs to be turned over and aired, in the prevailing professional degeneracy of the times. How about the government asking bids for annual medical services and medicines for an indefinite number of United States prisoners in a county jail? And suppose a few enterprising doctors, hankering after official honors, thoughtlessly sniff at the tempting morsel without, like Dr. R., comprehending where the wrong intrudes, which are most culpable, government clerks, medical enterprise, or journals and teachers? Ventilate, Doctor, ventilate

And then brave "Ethicus" figures in facts worthy of notice. He arraigns the chief medical officer of the pension department of the government, Dr. Hood, for "endorsing homœopaths as pension examiners." The "chief" or medical referee may be "a *regular* of the deepest dye," as "Ethicus" says he claims to be, nevertheless he is but a man — human, like the rest of us, and therefore, some of the instincts common to all mortals belong even to an official. In this way, while his acts as a physician are open to criticism, the man may be defensible, if not justifiable. I am the man's champion. The tenure of office under the present administration is held solely by virtue of unflinching loyalty to its behests, or by great proficiency in political gutter-sniping. A gutter snipe, conventionally, you know, is technically a commercial drummer. He gets his living by his trade, and so is the worthy prototype of the man who gets his office by working for other men's partisan or political interest. Both may make capital place-men without referenee to either moral worth or worthy ethical acts. But "Ethicus" unjustly chides the medical referee for "*endorsing* homœopaths." This he does not do. The Doctor only *recognizes* the medical certificates of examining boards (supposed to be physicians), appointees of the average Tom-and-Jerry congressman selected from the most active gut-

ter-snipes of the last campaign—selected without reference to any medical skill or qualification whatever, otherwise they would have been excluded as of a more worthy following. True, pension examiners receive their certificates of appointment from the Commissioner of Pensions, but the Commissioner now has no discretion in the matter, being the subsidized and humiliated servantof political bosses, known as Congressman, else the charger waits his official head. Here medical matters no longer belong to medical men, as they do in the army. Civil service reform even takes no interest in the medical wants of the Pension service. And the government, while looking to the medical department for medical and surgical fitness for army life and duties, now no longer cares for the qualification of medical men to do justice by her sick and maimed wards. It was for demagogical purposes that this most important matter has been denied medical men, and consigned to the quagmires of political "still-hunting." If the profession silently submits to this disgraceful divorcement without protest, let the first complaint come up from the outraged and mistreated pensioner and pension applicant. It is well known that the former Commissioner, Bennett, asserted the prerogatives of his office, and maintained its integrity by recognizing medical qualification in all of his appointments, thereby deserving great credit for his uncompromising stand in this respect. But times changed, and with them men and morals. Self respect, national pride, and professional honor now lurk enslaved in the poisoned evils of truckling government patronage, such as manhood should abhor as but lethal breeding beds of choleraic vibriones and pus bacteria. But let us not upbraid too severely those who by nature value manhood thus subdued under partisan shackles more than the disenthralled manhood of a free American citizen, for the preference of you and me and Ethicus might be(?) slightly modified, if submitted to an analysis in the same kind of crucible. Let us be charitable. I defend the man, but confound his acts. In allowing the official to envy our freedom and indepence, grant him pity for his tastes, credit for his enduring patience, and question not that it is all meant by *him(?)* to work out good for those who trust and are of long suffering. In this way charity might not be misplaced, even at the door of the "endorsed homœopath. Let the profession purge herself of incompetency (endorsed, too, if you please). Then demand of the government the right to control medical matters in civil as well as in military affairs. This right obtained, the occupation and endorsement, with official prestige of charlatans, under any name, will figure less in the impending perils of the ballot-box, to the credit of the profession and the good of the nation and people.

OCTOBER 21, 1883.

DEAR DR. DAVIS:

I am much pleased with your report on Prac. Med., and notice your recipe for typhoid fever. For several years, I have used a prescription for typhoid fever somewhat as follows, and have been much pleased with it. Almost all of my typhoid fever patients recover, though I have no hospital practice.

℞. Sugar, gum arabic, spts. turpentine, āā.....℥i.
Syr. ipecac.....℥ii.
Iodide sodium.....gr. x.
Cinnamon water, q. s. ft....℥ii.
ft. sol.....
S. Teaspoonful every 2 to 4 hours.

Sponging with warm or cold water is grateful. Small doses t. d. of quinine in some cases; sub. nit. bismuth and salicine to check diarrhœa, about cover the drugs used.

Good soups, fresh fruit juices, as from baked apples, and their well-cooked pulp, and orange and lemon juices, and sometimes liquid lactopeptine t. d. after nourishment, a teaspoonful. Fruit juices are too much neglected in fevers.

Change body linen every 24 or 48 hours; bed linen every 42 to 72 hours. Q. C. SMITH.

AMERICAN PUBLIC HEALTH ASSOCIATION.

CONVENTION AT DETROIT, MICH., NOV. 13, 1883.

Undernoted please find list of railroads over which transportation can be obtained at reduced rates.

Be good enough to say by return mail whether you desire to use any of these roads in your journey to and from here, and the necessary certificates will be sent you at once, on presentation of which at the ticket offices transportation will be furnished at reduced rates. Passengers from any point on line of Louisville and Nashville railroad will not require certificates, but can purchase tickets to Detroit at starting point, and will be returned at one-third fare:

Flint & Pere Marquette railroad, half fare.

Wabash, St. Louis & Pacific, 1⅓ fare round trip.

Lake Shore & Michigan Southern, 1⅓ fare round trip.

Detroit & Cleveland Steam Navigation Co., half fare each way.

Michigan Central & Canada Southern, 1⅓ fare round trip.

Detroit, Grand Haven & Milwaukee, 1⅓ fare round trip.

Detroit, Lansing & Northern, 1⅓ fare round trip.

Columbus & Hocking Valley, 1⅓ fare round trip.

Grand Trunk railway, 1⅓ fare round trip.

Great Western railway, 1⅓ fare round trip.

Louisville & Nashville, 1⅓ fare round trip.

Jeffersonville, Madison & Indianapolis, 1⅓ fare round trip.

W. K. MUIR,
Chairman Transportation Committee, Detroit, Mich.

TRAINED NURSES FOR THE COUNTRY.

EDITOR OF JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Country towns and villages are destitute of trained nurses. It is with the greatest difficulty that one can be obtained for any consideration. Almost every village has one or two self-styled nurses, who are

usually stupid, ignorant, and devoid of every qualification which would make them useful in the sick-room. It is difficult to conceive of a class of persons whose services in a community are better appreciated than a well-trained and efficient nurse.

It is not easy, and perhaps impossible, for physicians in rural districts to educate nurses, or at least to give them that kind of education which is required for a good nurse. We will have to look to training schools for them. Their services will be remunerated as well, and possibly better, than the district school teacher, while the position is not more exacting, nor the duties more arduous.

At the present time, it is evident that the country requires more nurses, and less doctors, more training schools for nurses, and less diploma-mills for grinding out doctors. J. F. JENKINS, M.D.

TECUMSEH, MICH.

FŒTID AND SWEATING FEET.

RED OAK, IOWA, Oct. 25, 1883.

Dear Editor: — In the AMERICAN MEDICAL JOURNAL of October 13, p. 428, among the "Medical Progress" articles, there is one for "Relief of Fœtid Sweating Feet by Subnitrate of Bismuth," a remedy which I have never tried, but will inclose a formula that with the correct observation of the instructions has been very certain of success in all the cases on which I know of its being tried:

℞ Aluminii et Ammo. Exic., grs. 2
Acidi Boracici..... " 2
Aquæ Simp. or Rosæ..... " 35

Mix. Sig.: Apply with soft sponge without rubbing, just as soon as the shoes and stockings are removed, while the feet are yet moist. This is quite necessary, as also the care not to rub.

Let this be repeated every two or three days, in the evening, and I have yet to know of its failure to check the profuse sweating or to lessen the fœtid odor. Respectfully, A. M. VAIL, M.D.

BOOK REVIEWS.

THE DISEASES OF MEN.

(1) PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES. By Fessenden N. Otis, M.D., Clinical Professor in the College of Physicians and Surgeons. New York: Surgeon to Charity Hospital, etc., New York. Bermingham & Co., 1883; pp. 584.

(2) SEXUAL IMPOTENCE IN THE MALE. By Wm. A. Hammond, M.D., Professor of the Diseases of the Mind and Nervous System, New York Post Graduate Medical School, etc. New York: Bermingham & Co., 1883; pp. 274.

(1) Professor Otis' book is a volume of the recorded experience of a wide awake observer, superadded to and balanced by as candid a *resume* of our bulky venereal literature as has yet been published. The excellence of this work is due in no small degree to the clear-headed, and, if the term is permissible, the *business-like* way in which the author attacks the vexatious problems in pathology, hygiene, and therapeutics, constantly presented by the clinical aspects of syphilis and gonorrhœa. In its series of clinical lessons, as the chapters are modestly styled, this work really embraces a study of the genito-urinary diseases more exhaustive and analytic than any of the standard treatises. On the other hand, it is not so painfully and artificially "systematic" as to leave the impression that the author had been too ambitious to produce a great work, which should become authoritative and final. Often it appears that the outcome of such ambitious writing is a book wherein clinical facts are presented obscurely, wrongly colored, *theoretish*. Prof. Otis shuns this fault. The subject of syphilis occupies the entire thirty chapters comprising Part I., or about one-half the book. Part II. is a treatise on gonorrhœa and its *sequelæ*. It is an admirable exposition of the latest knowledge on the subject, containing a summary of the views and practices of various modern authorities, and the writer's own estimate of the relative importance of each.

It is particularly to be commended in the constant references which are made to a variety of different opinions, as in the case of the value of "specific" treatment in clap; that more is given the reader than a barren catalogue of opposing or differing practices from which to select. We have the satisfaction of finding, in connection with each subject discussed, a very careful analysis of all available information to determine the vital question, *which* theory, *which* treatment deserves the most credit? The work is more valuable as an authority than Sir Henry Thompson's, not merely because it is later, but because it is also fairer and more exhaustive.

(2.) In dealing with delicate topics it is the habit of some writers to make an apology to the reader for the introduction of necessary but unsavory facts and records. With persons who have strong stomachs this is superfluous, but possibly all of us feel the subtle flattery conveyed in such an apology and prefer to be thus propitiated before any very nauseating recital of moral perversion or degradation.

We receive no such consideration at the hands of Prof. Hammond in his work on Sexual Impotence in the Male. It ought not, perhaps, to be laid as a fault against a writer that his style is peculiarly sketchy and entertaining. Yet it may possibly be asked as a question of good taste whether a certain class of subjects should not be handled with more of reserve and soberness than we find in the pages of this book. The numerous cases cited throughout the work necessarily partake of the nature of tales, and although their history and treatment is carefully detailed, yet enough adventitious coloring is worked into the description of each case to make it highly entertaining reading to non-medical readers. This fact has been accidentally illustrated more than once in the brief time the book has lain upon the reviewer's table.

Aside from this question of good taste, the work is an extremely valuable one—covering a ground hitherto partially explored, and covering it satisfactorily and clearly. Those important factors in man-

agement, viz.:—hygienic measures and moral (meaning psychical) influences are ably and satisfactorily discussed. An extended experience has enabled the author to speak with comparative certainty of the value of a few drugs, prominently sodium bromide, in the class of cases requiring medication.

A notable omission from the list of causes of temporary and also of permanent impotence is found in the case of priapism, which is given only a passing allusion.

E. W. A.

What to Do First in Accidents and Emergencies. A Manual Explaining the Treatment of Surgical and Other Injuries in the Absence of the Physician. By C. W. Dalles. Second Edition. P. Blakiston, Son & Co., Philadelphia.

This little book of one hundred and sixteen pages is well written and gives most excellent advice on the subjects treated. That a second edition has been demanded is good evidence that the work has proved useful. In its present form there are several new illustrations and much new matter.

The subject is treated of under the following main headings: Obstruction to Respiration; Foreign Bodies in the Eye, Nose and Ear; Fits or Seizures; Injuries to the Brain; Effects of Heat; Effects of Cold; Sprains; Dislocations; Fractures; Wounds; Railroad and Machinery Accidents; Hæmorrhage; Special Hæmorrhages; Transportation of Injured Persons; Poisons; Domestic Emergencies: Signs of Death; Supplies for Emergencies.

Contagious Diseases of Domesticated Animals. Investigations by Department of Agriculture. Washington Government Printing Office, 1883, 8vo, 271 Pp., Illustrated.

This work will interest the medical practitioner by showing how well veterinary medicine is keeping pace with the medical progress of the day, and how closely allied the studies of the causation of disease, especially in relation to the germ theory, have become with man and the lower animals. Dr. D. E. Salmon, D. V. M., furnishes a very thorough and critical article on "Southern Cattle Fever and Fowl Cholera," followed by the interesting studies of Dr. H. J. Detmen "Among the Cattle and Sheep of Texas," with the reports from other veterinary surgeons—Drs. Hines, Miller and Rose — particularly on "Contagious Pleuro-Pneumonia." Dr. Ezra M. Hunt discusses in a very practical paper "The Duty of the United States Government as to Contagious diseases," and Mr. Edwin J. Moffat, the London correspondent of the Department, gives interesting details regarding the "Foot and Mouth diseases of Great Britain." The text is well illustrated by some excellent micro-photographs, reproduced by the lithocaustic method, of micrococci, schizophytes, diseased liver, kidney and spleen tissues, and the sheep parasite, the strongylus contortus.

Dr. Salmon shows that the fever so prevalent, and fatal to all but young animals, in the Southern States, which affects cattle brought from the North, and supposed to be due to the influence of increased temperature upon imported cattle, is really the Texas fever and infectious; the native cattle, when taken beyond the infected districts, carrying that infection with them. He also shows that the infection of Texas fever is spreading over new territory, and that snow and ice are not the barriers they have heretofore been considered. He has succeeded in tracing the line which separates the infected from the uninfected parts of Virginia for many miles, and has traced it as definitely as possible, furnishing a map with his report, which shows at a glance the boundary line of the infected territory, so far as traced. His inoculations with splenic pulp are also very interesting. The only microscopic germ found was a micrococcus which was not inoculable. The indications are that infected cattle may infect fresh pastures to which they have access, and thus communicate the disease.

Vaccination of fowl cholera has been very thoroughly tested. Dr. Salmon devotes much space to the methods of Pasteur and others for attenuating virus. He establishes an immunity sufficient to affect birds during their whole lives; and is a strong advocate for vaccination in hog cholera, fowl cholera, black leg and charbon.

The Collective Investigation of Diphtheria. (as conducted by the *Therapeutic Gazette.*) By J. J. Mulheron, M.D. Detroit, 1883. Geo. S. Davis.

If it could be made in any way apparent that the *majority* of opinion at any one time upon a scientific question necessarily, or even probably, is correct, the book before us would have the merit of summarizing such opinion and declaring the result.

The volume is made up of letters from about one hundred physicians, in reply to circulars sent by mail asking each one's opinion as to the cause, nature and treatment of diphtheria.

The expectation of adding anything to scientific knowledge by such a method, is based either upon the assumption that the balance of medical opinion must be in the main correct, or else upon the supposition that some real pathological discoveries will be brought to light, whose obscure authors might otherwise have failed to publish them.

We deny the first assumption *in toto*. It is reasoning in a vicious circle to uphold it. Average medical opinion is based upon medical authorities. The average practitioner, who has to deal with hundreds of complex questions, can add but little to the minute investigations of master pathologists in their chosen specialties. It taxes his industry even to keep abreast of modern discoveries in the wide field he has to cover. How is it possible, then, that the average judgment of average men, obtained by a mere "counting of hands," can be considered of any value other than as a reflex of the teachings of the authorities which each of the witnesses depends upon for his knowledge?

Medical, like other scientific discoveries, are made not by public opinion, but by individuals, and such individuals who have the mental capacity of original investigation do not need the patronage of a bureau of "collective investigation" to discover their talents to the world.

On the reverse side, it may be said that this book has certainly no tendency to falsify any facts, but rather to confirm present ideas. Although not likely to add anything to scientific knowledge, it may excite interest and discussion in questions rather neglected.

The subject of diphtheria is a barren one, showing in very strong light the weakness of the system in a case where so little is known. The conclusions of the editor, after summing up the various views of his contributors, are neither more nor less valuable that if he had taken these opinions at first hand from the standard works, instead of letting the country practitioners do this for him and send him the results. As "collective investigation," so-called, seems to be a new departure in medical investigation, we desire to say a favorable word touching the fair-minded and earnest manner in which the compiler has dealt with the impossible problem set before him. Similar investigations, conducted with a view to obtaining some single definite information (such as statistics), with a less democratic and wholesale list of contributors, may yet prove a most valuable means of balancing and completing our information on practical medical questions. E. W. A.

MISCELLANEOUS.

CHICAGO TRAINING SCHOOL FOR NURSES.

The second graduating exercises of the Chicago Training School for Nurses was held on the 22nd of this month. Two years have passed since the training school started with two wards in the County Hospital and six pupil nurses. It now has seven wards, thirty-six pupil nurses, and two probationers. The small hired house, at a very inconvenient distance from the hospital, has given place to the nurses' home, situated within a block of the work.

During the last year 119 applications have been received from persons who wished to become trained nurses. Thirty-four of these were accepted on probation, and only twenty-two out of the number were accepted as pupil nurses. The number of patients cared for in the training school wards during the past year has been 4,301; number of births, 144; In the home the average number of the family has been 30; average for table expenses per month $234. It was found necessary, in order to complete the new home to borrow money for the purpose. Therefore, bonds to the amount of $10,000 were issued, secured by mortgage on the property. The society has the privilege of paying these bonds at the expiration of two years from the time they were issued.

The treasurer, Mrs. H. L. Frank, reported cash on hand, $6,436.84; amount of building fund, $13,210.36; bonds, $10,000; amount received from Cook County Hospital for services rendered, $6,350; received for private nursing, $514; private memberships, $1,440; subscriptions, $997.75; interest from banks, $306.32; seersucker sold to nurses, $152.59; total, $39,507.55; expenditures, building, $22,-616.51; hospital expenses, $3,238; household expenses, $5.329.55; taxes, $97.68; insurance, $168; furniture, $667.02; printing and postage, $206.37; balance, $6,436.84.

The following were elected as members of the new board of directors: Mrs. Lawrence, Mrs. J. C. Hilton, Mrs. Edward Wright, Mrs. Thomas Burrows, Mrs. W. S. Smith, Mrs. H. L. Frank, Mrs. W. G. Hubbard, Mrs. Dr. Stevenson, Mrs. S. L. Williams, Mrs. A. A. Carpenter, Mrs. Orson Smith, Mrs. A. A. Sprague, Mrs. Clinton Locke, Mrs. J. M. Walker, Mrs. E. Blackman, Mrs. Charles Hitchcock, Mrs. G. M. Hale, Mrs. G. W. Pitkin, Mrs. Judge Rogers, Mrs. N. K. Fairbank, Mrs. James Flower, Mrs. W. Penn Nixon, Mrs. G. W. Smith, Mrs. George L. Dunlap, Mrs. A. C. Bartlett.

Seven pupils were graduated. The diplomas were given to them by Dr. H. A. Johnson, who made a short address, giving them practical advice. Drs. Lyman, Mitchell and Briggs, Mrs. Wolcott, of Boston, County Commissioner Donnersberger and J. Y. Scammon spoke in regard to the work of the school.

NEW INVENTIONS.

INSTRUMENT FOR OPENING PELVIC ABSCESSES.

Prof. Clinton Cushing, M.D. (*Pacific Medical and Surgical Journal*, September), has devised an instrument, consisting of two blades, which when closed form a trocar, and when introduced into the abscess direct, or along the side of an aspirator needle, the handles can be closed, and the extremities separated so as to act as a dilator, and thus tear the connecting tissue sufficiently to furnish the most ample room for the escape of pus and the introduction of a drainage tube. The advantage of this instrument over a knife, he claims, is that the danger of injuring the ureter or an artery is reduced to a minimum; and the advantage over a trocar, is that of being able to make a large and free opening before withdrawing it, and with no additional risk.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE, JULY 1, 1883 TO SEPTEMBER 30, 1883:

Bailhache, P. H., Surgeon; detailed as member of board to examine candidates for promotion, Aug. 23, 1883; detailed as Surgeon-in-charge, Cape Charles Quarantine Station, September 5, 1883.

Miller, T. W., Surgeon; granted leave of absence for twenty-five days, August 31, 1883.

Wyman, Walter, Surgeon; detailed as member of board to examine candidates for promotion, Aug. 23, 1883.

Long, W. H., Surgeon: granted leave of absence for twenty days, Sept. 25, 1883.

Smith, Henry, Surgeon; directed to take charge of the quarantine service at the Capes, July 29, 1883.

Stoner, G. W., Passed Assistant Surgeon; granted leave of absence for thirty days, Aug. 24, 1883; to inspect the relief stations along the coast of Maine, Sept. 29, 1883.

Goldsborough, C. B., Passed Assistant Surgeon; granted leave of absence for thirty days, Aug. 29, 1883.

Banks, C. E., Assistant Surgeon; relieved from duty at Portland, Oregon, and to report to the Surgeon-General at Washington, July 10, 1883.

Carmichael, D. A., Assistant Surgeon; granted leave of absence for ten days, Aug. 31, 1883.

Peckham, Assistant Surgeon; to proceed to Portland, Maine, for temporary duty, Aug. 25. 1883.

Devan, S. C., Assistant Surgeon; to proceed to Portland, Oregon, and assume charge of the service, Sept. 11, 1883.

Kallock, B. C., Assistant Surgeon; to proceed to Philadelphia, Pa., for temporary duty July 25, 1883; to rejoin his station (New York) July 31, 1883.

Yemans, H. W., Assistant Surgeon; relieved from duty at Sitka, Alaska, and to proceed to Portland, Oregon for temporary duty July 10, 1883; to proceed to San Francisco, Cal., reporting for duty to Surgeon Vansant Sept. 11, 1883.

Glennan, A. H., Assistant Surgeon; to remain at Norfolk, Va., until further orders. July 29, 1883.

Wasdin, Eugene, Assitant Surgeon; to proceed to New Orleans, La., for temporary duty August 2, 1883; to proceed to Mobile, Ala., for temporary duty August 27, 1883; to rejoin his station (New Orleans) as soon as practicable. September 25, 1883.

PROMOTIONS.

Guitéras, John, Passed Assistant Surgeon; promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from September 1, 1883. August 31, 1883.

Wheeler, W. A., Passed Assistant Surgeon; promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury from September 1, 1883. August 31, 1883.

RESIGNATION.

O'Connor, F. J., Assistant Surgeon; resignation accepted by the Secretary of the Treasury, to take effect August 1, 1883. August 2, 1883.

APPOINTMENT.

Wasdin, Eugene, M.D., of South Carolina, having passed the examination required by the regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, August 2, 1883. August 25, 1883.

SOUTHWESTERN WISCONSIN MEDICAL ASSOCIATION.

EXCELSIOR, WIS., Oct. 17, 1883.

Dear Doctor:—The fifth regular session of the Southwestern Wisconsin Medical Association will be held at Lone Rock, Wis., Wednesday and Thursday, Nov. 21 and 22, 1883, commencing at 10 o'clock A. M., on Wednesday. Reports will be made by the following standing committees:

Surgery (No. 1.)—U. P. Stair and R. H. Delap. Obstetrics (No. 2.)—T. F. Stair and Garner. Practics of Medicine (No. 3.)—Wall and Haskall. Pathology (No. 4.)—Dinsdale and McGrath. Therapeutics and Materia Medica (No. 5.)—Coats and Kermott. Gynæcology (No. 6.)—Casey and Helm. New Remedies (No. 7.)—Armstrong and Gyer.

J. C. WRIGHT, M.D., Sec'y.

P. S.—It is the desire of the Association to have all regular physicians present, that we may have an enjoyable and profitable session. J. C. W., M.D.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY DURING WEEK ENDING OCTOBER 27, 1883.

Surgeon W. K. Van Reypen detached from the Naval Hospital, New York, and ordered to the U. S. S. Powhattan.

Surgeon H. M. Wells detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, New York.

Medical Inspector A. C. Gorgas' orders modified so that he will be detached from the Naval Hospital, Chelsea, Mass., on December 10th instead of on November 10th.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM OCTOBER 19, 1883, TO OCTOBER 26, 1883.

Bache, Dallas, Major and Surgeon; assigned to duty at Willet's Point New York (par. 1, S. O. 238, A. G. O., October 18, 1883).

Horton, S. M., Major and Surgeon; leave of absence for one month, with leave to apply for an extension of three months (par. 6, S. O. 216, Department of the Missouri, October 20, 1883).

Barnett, Richards, Captain and Assistant Surgeon; assigned to duty at Columbus Barracks, Columbus, Ohio (par. 1, S. O. 240, A. G. O., October 20, 1883).

Maus, Louis M., Captain and Assistant Surgeon; assigned to duty at Fort A. Lincoln, D. T. (par. 4, S. O. 180, Department of Dakota, October 15, 1883).

NECROLOGY.

WOODMAN, LUCIUS C., M.D., was the son of Rev. Jonathan Woodman, and was born in Sutton, Caledonia county, Vermont, March 20, 1828; died at Paw-Paw, Michigan, April 12, 1883, aged fifty-five years.

Dr. Woodman, after receiving a fair academical education, studied medicine in the office of Dr. Kimball, of Lowell, Massachusetts, and graduated at the Medical Department of Vermont University, located at that time at Woodstock, Vt., in 1847, at the age of 21. Being threatened with consumption, of which disease his elder brother, also a physician, had died, his friends advised a change of climate, and he came to Michigan about 1851. After measurably regaining his health, he commenced practice with Dr. Andrews, of Paw-Paw, Michigan, with whom he continued till the breaking out of the war of the Rebellion, when he entered the Third Michigan Cavalry regiment as Assistant Surgeon, and served in it as

such until 1863, when he was commissioned Surgeon of the Eleventh Michigan Cavalry, and continued to serve in that capacity till the close of the war, and was mustered out of the service in August, 1865. During the war he was at one time taken prisoner, and spent a few weeks in Libby prison.

As an army surgeon he was kind, faithful in the discharge of his duties, and exceptionally skillful. He was truly the soldier's friend, and by all ranks universally beloved. "Everywhere brave, he faced a thousand deaths to stand between death and the soldiers."

At the conclusion of the war he went to South Haven, Michigan, where he practiced his profession till May, 1877, when he returned to Paw-Paw, where he remained till his death.

As a physician and surgeon Dr. Woodman had a wide reputation, which he thoroughly merited, for he did his work faithfully and well. He was a careful and skillful operator, and an exceptionally fine diagnostician, particularly in diseases of the heart and lungs. He was by nature and study singularly well equipped for the successful practice of his profession in all its branches. The thorough hold he had upon his patients and friends was something almost wonderful. Dr. Woodman was a member of the Van Buren County Medical Society, of the Michigan State Medical Society, and of the American Medical Association. He left two young sons, who are doubly orphans, having lost their mother only a few weeks previous to the death of their father.

J. ANDREWS, M.D., of Paw Paw, Michigan.

BRALEY, NORMAN WING, M.D., was born in Pomfret, Vt., August 14th, 1823; died at Barre, Vt., September 11th, 1880.

He was the eldest child of Geo. W. Braley and Desire Brockway Braley, natives of Stamford, Conn. His father was descended from a Scotch-Irish family, who came in the early part of the present century to this country. Norman was the eldest of six children, three of whom survive him. His preliminary education was from the district school at home, and from the academy at Woodstock. He studied medicine with Dr. P. R. Palmer, and graduated at the Medical College at Woodstock in June, 1844.

He settled in medical practice late in the year 1844, at Washington, Vt., where he remained about six years, during which time he was married to Miss A. P. Calef, of Washington. In 1852, after having traveled through the West in search of a more desirable location, he settled in Chelsea, Vt., in copartnership with Dr. McClure, when at the end of two years the latter retired, leaving Dr. Braley alone.

Then he made an extensive reputation, and won the confidence of the public and of his neighboring physicians, so that he had a large consultation practice, and was considered the leading physician of Orange county.

In 1872 he removed to Barre, and partially retired from medical practice. Here he became President of the National Bank of Barre, and engaged in manufactures and other financial business. Still, he occasionally practiced his profession until his death, which was after a short illness at his home.

He left a widow and three sons, the eldest of whom is a physician, and succeeds his father in practice at Barre (Dr. B. W. Braley). The two younger are yet at school. Dr. Braley was everywhere respected for the purity of his character, for his agreeable presence, with a suavity of manner that made him always a welcome guest, and for his skill and fidelity in attendance upon the sick. He died lamented by a large circle of real mourners, and his loss will long be felt in the communities in which he was so prominent and useful a member.

O. F. FASSETT, M.D.

YOUNG, NOBLE, M.D., of Washington, D. C. Was born in Baltimore, Md., June 26, 1808; died at the residence of his son-in-law, Maj. H. A. Egbert, at Sackett's Harbor, N. Y., April 11, 1883. He prepared for college at the Catholic seminary in Washington. Entering Columbia College, he took a regular course, his medical degree in 1828. He then began the practice of his profession, and at the time of his death was the oldest practitioner in Washington city, and lived for nearly sixty years in the same house, on Pennsylvania avenue. Dr. Young was a man of extensive acquirements, a good Latin and French scholar, and particulariy fond of the best belle-letter literature. He was most entertaining in conversation, a good writer, and a forcible debater, and one of the most attractive lecturers on the general principles and practice that any college could boast of. Dr. Young was one of the chief promoters and founders of the Medical Department of the University of Georgetown College. This school was opened in 1849, and Dr. Young held the chair of the principles and practice until 1876, when he resigned, and was elected emeritus professor. He was for many years connected with the Board of Health prior to the war. During and since the war he was Physician to the Jail. His contributions to medical literature are chiefly addresses. He was one of the charter members of the Medical Society of the District of Columbia, and one of the original members of the Medical Association of the District, and filled the various offices of each, including that of President, and member of the American Medical Association since 1848. He was a member of the Board of Directors of Columbia Hospital for Women. These institutions convened special meetings, and passed resolutions of respect for his memory. The doctor married, early in his professional life, the daughter of Dr. Alexander McWilliams; she died less than a year before himself. He leaves five children. His funeral took place from Trinity church, the Rev. Messrs. Addison and Forrest officiating. His remains were followed to the last resting place in the Congressional cemetery by a large concourse of relatives and personal friends.

J. M. T.